

EFL Reading Comprehension and Pictures:

How Do Pictures Affect EFL College Students' Understanding of an English Story?

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1. Introduction

This study will examine the effects of pictures on EFL reading comprehension and the understanding of an English story, focusing on the relationship between pictures and words. The reason why the author put the focus on the effects of pictures on EFL reading comprehension is that the author realized pictures were helpful in the understanding of the text through the experience of translating English picture books, and found some interesting relationships between the pictures and the words. In the author's opinion, the relationship will relate readers' understanding of English and the stories.

In the experiment, a picture book written in English is used as the material, and the understanding of the story in the case of reading the text with pictures is compared to the understanding in the case of reading the text without pictures. Japanese EFL college students, who seemed to have enough English proficiency and reading skills, participated. The author expects to find out the effects that pictures have on the understanding of the English story, and the effective use of pictures in reading materials for EFL learners.

2. Previous Studies

2.1. EFL Reading Comprehension

2.1.1. EFL Reading Process

Carrell and Eisterhold (1988) claim reading a text is an interactive process between the reader's background knowledge and the text, in their Schema theory. Schemata mean "generic concepts stored in long-term memory" (Temma, 1989, p.50). The theory proposes that readers not only use linguistic knowledge but also need to relate the textual material to readers' own knowledge for the efficient comprehension. According to Temma (1989, 2002) in reading texts the writers and the readers exist, and the comprehension is done by the dynamic interaction between the two. She

calls reading comprehension “an active constructive action” that is because in the process readers construct the meaning from the letters on paper by using all their intellectual abilities. “Readers not only use such linguistic information as word meaning and the knowledge of structures but connect the information logically. They also use general knowledge, and assume, analogize, predict, expect, integrate, and reconfirm, complement, and correct their interpretations. Then, finally they reach the consistent interpretation of texts” (Temma, 2002, p.5). She also refers to the importance of imagining the events or situations described in words.

2.1.2. Problems in EFL Reading Comprehension

Temma (2002) points out four problems in reading comprehension for EFL learners: the problems are in 1) the discrimination and decoding of words, 2) structures, 3) paragraph and text 4) the use of other knowledge except for language: that is the use of inference, schemata, and background knowledge. This suggests that for most EFL learners linguistic knowledge especially enough vocabulary is necessary and the other knowledge, except for linguistic knowledge, such as inference and general knowledge is also very important in comprehending texts.

2.2. Pictures and Words in Picture Books

Graham (2000) makes a distinction between pictures and words in picture books. According to her, pictures’ specialty is show, “what characters look like, what they are doing”, and the setting, and characters’ feelings”, while words’ specialty is “name, locate in time, generalize and tell what characters are saying and thinking”, and earlier or later events (p.61). She argues that pictures and words in picture books need not say the same thing in order to leave the room for readers’ “creativity” satisfies them. Lewis (2001) also says that “pictures show and words tell” (p.95), and “what we are shown is never the same as what we are told” (p.97). And, his following statement indicates the effects of pictures in understanding words, “the showing helps us interpret and understand what we are told”. He concludes the fascinating and valuable thing of picture books is in “the difference and the mutual animation” between pictures and words (p.97). Wolfenbarger

and Sipe (2007) restate that the pictures and words don't tell exactly the same story in picture books. They suggest picture books, which "create a playing field where the readers explore and experiment with relationship between pictures and words", can give the readers satisfaction (p.274).

Nikolajeva and Scott (2000) focus especially on the relationship between the pictures and words in picture books. According to them, there are three interactions between pictures and words, and two dynamics exist in one of the interactions: 1) in symmetrical interaction, pictures and words tell the same story, 2) in enhancing interaction, pictures elaborate words or words elaborate pictures, this interaction can be separated into two dynamics: one is complementary dynamics: pictures and words support each other providing different additional information that one of them don't have when the interaction is very meaningful, and the other is counterpointing dynamics: when the different information between pictures and words presents, they work together to convey meaning beyond the each range, and 3) in contradictory interaction, the greatest form of counterpointing, pictures and words are opposite to each other.

Maesawa (1999), who is a Japanese translator of picture books for children, defines the fundamental role of pictures in picture books as "to help develop the story" (p.65). And, she explains the six roles of pictures in picture books from the perspective of a picture books translator: pictures 1) develop the story, 2) tell or narrate the story, 3) set the atmosphere of the whole story and help readers understand the context, 4) impress readers with the climax of the story or the points to emphasize, 5) explain the fact which is difficult to understand or imagine from words for readers, 6) make the words meaning clear. And she mentions the effects of pictures that pictures make readers understand what words tell, matching pictures with words helps readers' interpretations of the intentions or connotations because they can make up readers' limited linguistic knowledge and experience. Her statement focuses on the effectiveness of pictures in children's understandings of the story in picture books. But this can be applied in the case of EFL learners' reading comprehension. It means that the relationship in which pictures and words are complementary to each other helps readers understand the words and also the story in EFL.

3. Research Hypotheses

- (1) Pictures in the text always help the EFL readers' comprehension.
- (2) Pictures are most helpful when pictures and words are complementary.
- (3) Pictures deepen the readers' appreciation of an English story.

4. Method

4.1. Participants

The author conducted an experiment in order to examine the research hypotheses. 50 students in the Faculty of Education at Iwate University, who took three classes in the Department of English Education, participated. Most of them are English majors but some are not. They were divided into two groups; one group is for 25 participants who read the text with pictures (With Pictures Group: WPG) and the other group is for another 25 participants who read the text without pictures (No Picture Group: NPG).

4.2. Procedures

The students in the each class were divided into two, WPG and NPG. The author gave the participants the text with pictures and the text without pictures respectively, a reading test with 15 open-ended questions, and with the blank for the summary of the story. They were required to read the text, answer the questions, and write the summary in Japanese. It was permitted to refer to the text during the test. Only WPG participants were asked to choose useful information in the answering, among 'pictures', 'both pictures and words', and 'words' to examine the effects of pictures. The time is not limited so that all the participants can finish. The whole process needed approximately 50 to 60 minutes.

4.3. Material

As the material, a picture book, *The Goat in the Rug* was used (See Appendixes). In this story, a Navajo weaver, Glenmae weaves a rug from her goat, Geraldine's wool. And the heroine, Geraldine narrates the process of the rug weaving by her friend, Glenmae. The title was not presented to participants, in case the participant's comprehension of the story should be affected or the effects of pictures should be spoiled.

5. Results: 15 Questions

5.1. The Scores in WPG and NPG

The scores of 15 questions, the means, the standard deviations, the results of T-test, are shown in Table 1. The score of each question was counted on a scale of 0 to 2, and the perfect score would be 30. As the table shows, WPG participants had higher average scores than NPG participants in the questions, Q.2, Q.4, Q.6, Q.7, Q.10, Q.12, Q.14, and Q.15. While the questions, in which NPG had higher average scores than WPG participants, are Q.1, Q.3, Q.5, Q.8, Q.9, Q.11, and Q.13. The total was higher in WPG than in NPG. And, from the result of T-test, it could not be proven that WPG participants had statistically higher scores than NPG participants in the questions: Q.2, Q.6, Q.7, Q.10, Q.12, Q.14, and Q.15, except for Q.4.

Table 1: Results of 15 questions

Questions	WPG n=25		NPG n=25		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Q.1	1.04	0.45	1.16	0.47	-0.91
Q.2	1.36	0.57	1.32	0.48	0.27
Q.3	1.64	0.49	1.68	0.48	-0.29
Q.4	1.84	0.55	0.56	0.92	5.98***
Q.5	1.16	0.69	1.24	0.6	-0.44
Q.6	1	0.98	0.8	0.94	0.72
Q.7	1.36	0.64	1.24	0.66	0.65
Q.8	1.84	0.37	1.96	0.2	-1.41
Q.9	1.88	0.33	1.96	0.2	-1.03
Q.10	1.4	0.58	1.36	0.57	0.25
Q.11	1.12	0.44	1.16	0.37	-0.35
Q.12	1.52	0.65	1.4	0.71	0.62
Q.13	0.68	0.56	0.8	0.65	-0.7
Q.14	1.08	0.49	0.96	0.61	0.76
Q.15	1.08	0.4	1	0.58	0.57
Total	20	3.22	18.6	2.74	1.65

* $p < .05$. ** $p < .01$. *** $p < .001$.

(Scoring: each question: 0-2, the perfect score: 30)

5.2. The Use of Pictures and the Scores in WPG

With the reading test, the author asked the participants in WPG which one, 'pictures', 'both pictures and words', or 'words', in the text was the most useful for them to answer the 15 questions. We can know how pictures were helpful for WPG participants from the number of each participant who chose 'only pictures', 'both pictures and words', or 'only words' as useful information for the answer to each question. Table 2 shows how many WPG participants chose 'only pictures', 'both pictures and words', or 'only words' as useful information. And, the average scores of the each participant who chose 'only pictures', 'both pictures and words', or 'only words' are shown in Table 3.

Table 2: The number of participants who chose pictures, words, or both

Choices: Questions	Only Pictures	Pictures & Words	Only Words	Total
Q.1	3	10	12	25
Q.2	2	3	19	24
Q.3	—	8	17	25
Q.4	8	12	4	24
Q.5	—	5	20	25
Q.6	6	5	10	21
Q.7	—	11	12	23
Q.8	—	10	13	23
Q.9	1	11	11	23
Q.10	2	—	23	25
Q.11	1	1	23	25
Q.12	—	19	6	25
Q.13	—	—	17	17
Q.14	2	9	10	21
Q.15	3	11	9	23

(WPG, N=25)

Table 3: The scores of each participant who chose pictures, words, or both

Choices: Questions:	Only Pictures	Pictures & Words	Only Words	Average
Q.1	1	0.9	1.17	1.04
Q.2	1	1.33	1.4	1.36
Q.3	—	1.5	1.71	1.64
Q.4	2	1.83	1.6	1.84
Q.5	—	1	1.2	1.16
Q.6	0	1.4	1.8	1
Q.7	—	1.09	1.57	1.36
Q.8	—	1.9	1.8	1.84
Q.9	2	2	1.77	1.88
Q.10	1.5	—	1.39	1.4
Q.11	2	1	1.09	1.12
Q.12	—	1.68	1	1.52
Q.13	—	—	0.68	0.68
Q.14	1	1.11	1.18	1.08
Q.15	1	1	1.18	1.08

6. Analysis and Discussion

6.1. Questions for Further Consideration

Based on the results shown in the above tables, some of the questions are classified into four: the questions in which 1) WPG participants tended to rely on pictures and the 'pictures users' had higher scores, 2) they tended to rely on pictures but the 'pictures users' had lower scores, 3) they tended to rely on only words but the 'words users' had higher scores, and 4) they tended to rely on only words and the 'words users' had higher scores. The author regarded the participants who chose only 'pictures' and 'both pictures and words' as 'pictures users', while the participants who chose 'both pictures and words' and 'only words' were regarded as 'words users'. From Table 4, we can see that the participants in WPG used pictures and had higher scores in Q.4 and Q.12, they used pictures but had lower scores in Q.1 and Q.6, they didn't much use pictures but had higher scores in Q.10 and Q.11, and they didn't use pictures and had lower score in Q.13.

Table 4: Questions for further consideration

The use of pictures: 'pictures users':	Greater frequency	Lesser frequency
Higher scores	Q.4, Q.12	Q.10, Q.11
Lower scores	Q.1, Q.6	Q.13

6.2. Questions and the Information from Text

6.2.1. Information from Pictures and Words

We will examine the text, pictures and words, closely to find the effects of pictures, by focusing on the seven questions shown in Table 4, Q.1, Q.4, Q.6, Q.10, Q.11, and Q.12. Also, the reasons why the frequency in the use of pictures is greater or less and why the score of the 'pictures users' is higher or lower will be mentioned. (See Appendixes for the questions and the text.)

Q.1: What is one of the main characters, Geraldine, like?

In this question, the frequency in the use of pictures is greater but the 'pictures users' have lower score than 'words users' in WPG. Compared with the score of NPG, WPG have the lower than the one of NPG. As the information from the text, at the first page, the picture shows Geraldine is a goat and words tell only her name and she lives with Glenmae at Window Rock. The word, "goat" appears at the later page, p.25. The reasons for the greater frequency in the use of picture in WPG and the lower score of the 'pictures users' seem to be that the picture 1) has stronger impact on the readers than words, 2) spoils the readers' reading of information from the words, and 3) misleads the readers into wrong interpretations because many actually mistook Geraldine for a sheep, not goat.

Q.4: What did Glenmae sharpen a large pair of scissors for?

This is the only question in which WPG has the significantly higher score than NPG. And, the frequency in the use of pictures is greater, and the 'pictures users' have higher score than 'words users'. The reason why the pictures are effective in this question is that only pictures give the hint for the answer clearly, words don't mention. Looking at p.3, the picture shows the result of that Glenmae sharpened the scissors, Geraldine who already had her

wool cut, while words just tell that Glenmae was sharpening the scissors for a long time and Geraldine didn't understand the reason. The picture seems to help the readers' understanding by giving the information words don't tell explicitly.

Q.6: What is the meaning of the words, "lather" and "suds"?

The participants are expected to understand the meaning of the two words, which seemed to be unfamiliar to them, by using the context. The information from the words on p.4 and p.5 tell "when Glenmae mixed the roots with water, the roots made a soapy rich lather" and "she washed the wool in the suds until it was clean and whit", while the pictures show the context as the image, Glenmae chopping up the roots and washing the wool, and give additional information words don't mention, such as a bucket and a watering pot. The reason why the frequency in the use of pictures is greater but the score of the 'picture users' is lower can be explained by this additional information from the pictures. Most of 'picture users' actually mistook the words meaning. Their answers were "a bucket" because of information from the pictures. The additional information the pictures gave made the readers confused and that caused the misunderstanding. And, pictures seem to have hindered the readers from reading words and using the context for the answer.

Q.10: Why did Glenmae go to a store alone, the next day?

Q.11: What did Geraldine feel while staying home alone?

In the both two questions, the score of 'picture users' is higher than 'word users' though the number is small, only two participants each. And, there was hardly any difference in the scores between WPG and NPG. These questions asked the participants not only to answer from the only words information, "the dye Glenmae could buy wasn't the same as the kind she makes from plants, but since Geraldine made such a pig of herself, it wouldn't have to do", and "Geraldine worried that Glenmae would still be angry when Glenmae got back", but also to refer to the characters' feeling, Glenmae is angry and Geraldine is sorry about eating plants, by considering the former context, the trouble in their walk. In fact, most of the participants answered

from only words information. However, there were some participants who referred to the characters' feelings in WPG more than in NPG. That is because the information from pictures on p.13 and p.14 shows the characters' expressions and the atmosphere well. On p.13, Geraldine looks sorry for eating plants and sees off Glenmae through the window in the house, while Glenmae looks a little angry and she locked the door, and on p.14 Geraldine snuggles to Glenmae after she got back home. As the reason for the low frequency in the use of pictures and higher scores of the 'pictures users', it will be said that almost all the participants seem to have used only word information without relying on the pictures which represent the characters' face expressions closely. Sometimes the detailed information from pictures seems not to be read or noticed by readers.

Q.12: What was Geraldine worrying about during the dyeing by Glenmae?

This is the question in which the frequency in the use of pictures is great and the scores of the 'picture users' are higher. The 'picture users' in the question mean the participants who regarded 'both pictures and words' as useful because there was no participants who chose 'only pictures'. Looking at the text for the question, there is a correspondence in the information between the pictures and the words. The words on p.16 and p.17, "Geraldine is thinking that she become only one colorful goat" are shown as the image in the picture on p.16. At the sight of the picture, the participants can grasp what Geraldine is thinking about. This will be the explanation of the reason for the greater frequency in the use of pictures and higher scores of the 'pictures users'. Pictures seem to help readers' comprehension by corresponding to words. Sometimes readers can get much information at the sight of a picture while words need longer explanation for it.

Q.13: Why does Glenmae form a design that would never be woven again?

This question seems to be difficult for all the participants as the low scores in both WPG and NPG show. However, WPG participants don't seem to have used pictures for the answer because there were no 'picture users' at all in this question. The participants are expected to answer the question by understanding the whole process of the rug weaving, not just understanding

the words on p.21, “just as every Navajo weaver before her had done for many years, Glenmae formed a design that would never be woven again”. The tasks for making a rug such as spinning, dyeing, and weaving are all done by Glenmae herself, though Geraldine sometimes help her. Because the rug is woven by Glenmae’s hand and from Geraldine’s wool, it is impossible to make the same design: the same colors, pattern, and texture. Though almost all the participants seem to have answered by using information from the words, there were a few participants referred to the time-consuming tasks by Glenmae’s hand and the originality of the rug of Glenmae and Geraldine. As the reason for the low frequency in the use of pictures and scores, most participants tried to answer by using the information from words and had mistakes in understanding of the meaning. Although pictures show enough information about the process of the rug weaving, even WPG participants didn’t seem to use pictures at all as the clue for the answer when they could not understand. They seem to have read only words in the text, not read the story with pictures, just for answering the questions as if they took a test.

6.2.2. The Effects of Pictures

After the examination into the text, pictures and words, some good effects in the use of pictures with words and problems of pictures are found.

Pictures seem to be effective in readers’ comprehending,

- 1) when they give the information explicitly words don’t tell.
- 2) when they represent what the characters are like, the expressions, and the atmosphere.
- 3) when they show the context as the image.
- 4) when they give the information corresponding to words.

While, pictures are not effective because

- 1) when they have stronger impact on the readers than words, they spoil the readers’ reading words and using the context.
- 2) when they are ambiguous, readers are misled into wrong interpretations.
- 3) when pictures give too much or additional information, readers are confused and have misunderstandings.
- 4) when they show details, readers can not notice the information.

6.3. Descriptions of the Summary

6.3.1. The Accuracy in Factual Understanding

Looking through the descriptions of the summary written by the participants, the author found some of them included misinterpretations or wrong information. As shown in Table 5, six participants in the NPG had mistakes in their summaries, while in WPG only one participant had mistakes. WPG participants seemed to understand the facts of the story and explain in their own words more accurately than NPG participants.

Table 5: The number of participants: the summary has wrong information

Summary	WPG (N=24)	NPG (N=24)
Includes wrong information	1	6

6.3.2. The Structure

The descriptions of the summary can be classified into two types of the structures: some have only the facts of the story, while others include participants' interpretations. That means some participants picked out the words in the text and wrote only the facts of the story briefly, while others described the summary in their own words and expressed their interpretations with the facts. Table 6 shows the number of the participants in WPG and NPG, who told only facts of the story or who included their interpretation in the summary.

Table 6: The number of participants in each kind of the structure

In the summary,	WPG N=24	NPG N=24
Only factual information	11	10
Includes own interpretations	13	14

6.3.3. Interpretations: Factual or Creative

As shown in Table 6, the summaries which include the participants' own interpretations were examined further, and a difference was found. That is some participants interpreted the story based on the factual information from the text, while others interpreted the story beyond the fact of the story and more creatively. The author classified these interpretations into 'subjective' and 'objective' interpretations. The interpretations, which include the participants' creativeness such as their own idea, feeling, and opinion, are regarded as 'subjective', while 'objective' are the ones that can be read from the textual information or the facts in the story. From Table 7, we can know that almost all NPG participants made 'objective interpretations' and WPG participants made more 'subjective interpretations' than NPG participants.

Table 7: The number of participants' subjective and objective interpretations

Interpretation	WPG N=13	NPG N=14
Subjective	6	2
Objective	8	12

6.4. The Expressions of Appreciation

6.4.1. 'Friendship' as the Theme in the Story

The descriptive answers by the participants in Q.15 will be focused on. The question asked the theme in the story. There were many participants who interpreted the theme as 'the friendship between the main characters, Glenmae and Geraldine'. The examples of the expressions by the participants, which translated into English by the author, are shown in Table 8. We can know that WPG participants expressed the two characters' 'friendship' in their own words more than NPG participants. This suggests that WPG participants might develop deeper and more sympathetic understanding about the relationship between the two characters.

Table 8: The expressions for friendship between Geraldine and Glenmae

WPG (N=6 /24)	NPG (N=2 /21)
<ul style="list-style-type: none"> - <i>Warmth</i> from their friendship - A sheep who <i>loves</i> a weaver's work - The importance of <i>helping each other</i> - A <i>bond</i> between Glenmae and Geraldine - They live and work <i>together in friendship</i> - <i>Deepening their affection</i> through a rug weaving 	<ul style="list-style-type: none"> - <i>Preciousness</i> - They make a rug <i>helping each other</i>

(Translated into English by the author)

6.4.2. Summary of the Story

Now we will look at the descriptions of the summary by the participants. There were many summaries expressed in their own words, various creative expressions, and the words for modification. That will be a sign of the participants' appreciation of the story. The examples of the expressions for the summary interpreted subjectively, as already stated in 6.3.3., by WPG and NPG participants are shown in Table 9 and Table 10.

Table 9: WPG participants' descriptions (N=6)

<ul style="list-style-type: none"> - <i>There are people who are getting along with nature and animals.</i> The each task for the weaving is all done by hands, from spinning to dyeing. A sheep narrates their <i>heartwarming life</i> though the <i>companionship</i> with a weaver. - <i>I felt</i> their friendship between Glenmae makes a rug <i>efficiently without any waste</i>, and Geraldine. <i>I felt there is something warm in their friendship</i> because Glenmae who is working on a rug weaving <i>hard seems to make the rug for Geraldine.</i> - A female weaver, Glenmae weave a rug <i>making use of Geraldine's wool.</i> She <i>struggles</i> with a rug weaving and <i>Geraldine is looking forward to her work,</i> They are good friends and <i>snuggle up to each other and live together in friendship.</i> - A weaver and a goat complete a rug together. <i>I felt</i> the friendship <i>beyond their species, cooperation and eagerness that they work on one thing.</i> - <i>The importance of helping each other even if time passes by.</i> - The theme in the story is <i>a strong bond between Geraldine and Glenmae.</i> <i>The deep connection</i> between them is <i>hidden under the story because Glenmae cannot make a</i>

rug without Geraldine, and Geraldine can be with Glenmae as long as Glenmae continues to weaving rugs.

(Translated into English by the author)

Table 10: NPG participants' descriptions (N=2)

- *A weaver teaches how to make a rug to the friend who doesn't know anything about rug weaving through the experience. It is very valuable because there are few Navajo weavers and the person who takes over like Geraldine.*

- *This is the story about that Glenmae always works hard because she wish to make the best one.*

(Translated into English by the author)

7. Implications

7.1. The Suggestion to the Use of Pictures in Reading Materials

A picture book was used as the material in the reading text for the experiment. From the results of the experiment, it is found that pictures seem to help readers' comprehension when pictures give the explicit information words cannot tell and when they show what words tell as the image. As we have already seen, pictures and words in picture books have roles respectively, and there are various relationship and interactions between them. Pictures in picture books seem to be special because the pictures make a story with words in a picture book. Pictures in the picture books usually go with the story, the context in the text. These characteristics of the pictures in picture books will be applied to the use of pictures in the reading materials for EFL learners. It may be possible for the materials makers to manipulate the relationship between pictures and words, in order to improve and develop the reading skills of the learners at every level.

7.2. The Difficulties in Making Tests for Reading Comprehension

Many difficulties in making the test for reading comprehension, especially in making question to measure readers' understanding of the story, are found. Some questions in the reading test were made based on the words information in the text. That means participants can answer correctly by just finding the information in the text and extracting the parts as it is. Such

questions were not enough to measure the readers' understanding. The author found it was quite difficult to grasp the participants' achievement of reading and understanding the story by just using the questions and the answers written in words. However, the descriptive answers of the theme in the story and the summary helped the author grasp the each participant's understanding; how much they can understand the text, how they interpret the story, and how much they can explain their interpretations in their words.

Because the process of readers' comprehension is invisible to others, it is necessary to be expressed or explained what they can understand as much as possible. But what readers can express or explain doesn't always mean their understanding. Making questions and considering the answers need great care.

8. Conclusions

The author would like to offer the answers to three research hypotheses:

- (1) Pictures in the text always help the EFL readers' comprehension.
 - (2) Pictures are most helpful when pictures and words are complementary.
 - (3) Pictures deepen the readers' understanding of an English story.
-
- (1) The answer is no. Pictures don't necessarily help readers' comprehension. That is because 1) WPG participants had higher scores than NPG participants in some questions but not in all the questions, and the difference was not significant except for in one question, 2) not all the participants in WPG needed pictures in answering the questions, actually there were many who used only words instead of pictures, and 3) in some questions, the participants in WPG who used pictures for the answer had lower scores than the participants who used only words.
 - (2) The answer is partly yes. Pictures help readers' comprehension when they show the information that words don't tell explicitly or the same one that words tell corresponding to the words, as the images. These relationships between pictures and words can be called complementary. However, even if they are complementary, pictures sometimes interfere with readers' comprehension, spoil their reading words and the context,

and mislead them into wrong interpretations, by the strong impact, the ambiguity, or too much information. And, sometimes detailed and much information from pictures can not be used as the clues or even read by readers.

- (3) The answer is yes. As the analysis of the participants' descriptions in Q.15 and the summary shows, 1) WPG participants tended to not only understand accurately but also interpret the story including their own impressions, more than NPG participants. And 2) there were creative expressions for the relationship between the two characters, Glenmae and Geraldine and for the interpretations of the whole story. Pictures seem to have advanced the readers' appreciation of the story.

This study investigated the effects of the pictures on EFL college students' reading comprehension by using an English story. As the result, in the scores of the reading test, there was not a significant difference between the participants who read the text with pictures and the participants who read the text without pictures. The pictures didn't seem to be helpful to the participants, who have enough English proficiency and reading skills to some extent, in reading the story. However, the pictures seemed to deepen the participants' understanding of the story certainly, as the analysis of the descriptive answers by the participants shows.

As stated in implication section, the author expects that pictures will be used for the EFL reading materials in more effective ways. Pictures sometimes are helpful and useful to the learners but sometimes not, rather they cause the learners' misunderstanding. And, the materials with pictures are not for children learners or the learners at elementary levels. The relationship between words and pictures are flexible and can be manipulated according to the levels of the learners' proficiency in English. Moreover, the reading materials like picture books, which have good story and attractive pictures, will be effective in learning English. These materials will enhance learners' motivation to learn English, intensify their eagerness to read English stories further, and develop their reading skills.

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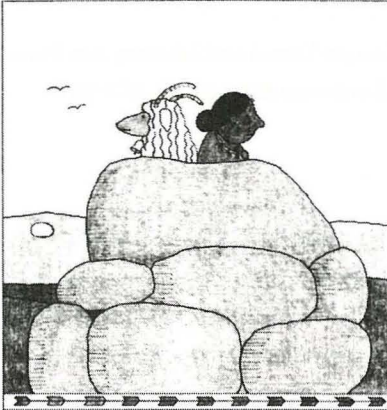
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Appendixes

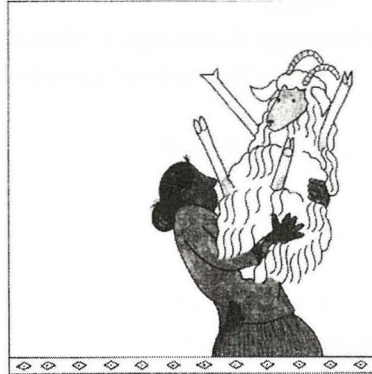
Reading text (with pictures):

p.1



My name is Geraldine and I live near a place called Window Rock with my Navajo friend, Glenmae. It's called Window Rock because it has a big round hole in it that looks like a window open to the sky.

p.2



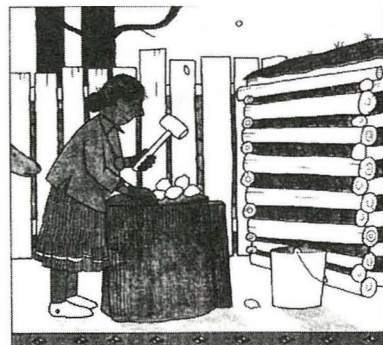
Glenmae is called Glenmae most of the time because it's easier to say than her Indian name: Glee 'Nasbah. In English that means something like female warrior, but she's really a Navajo weaver. I guess that's why, one day, she decided to weave me into a rug.

p.3



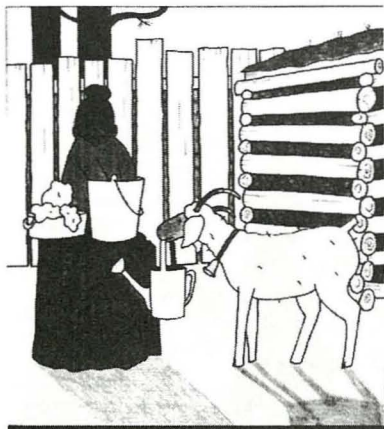
I remember it was a warm, sunny afternoon. Glenmae had spent most of the morning sharpening a large pair of scissors. I had no idea what she was going to use them for, but it didn't take me long to find out.

p.4



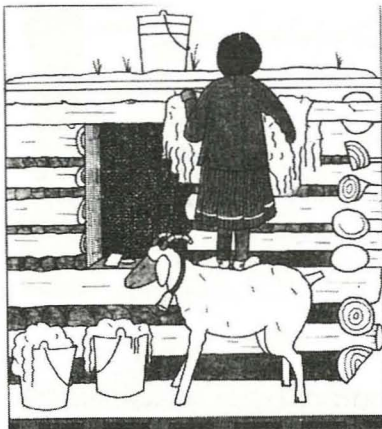
The first thing Glenmae did was chop up roots from a yucca plant. The roots made a soapy, rich lather when she mixed them with water.

p.5



She washed my wool in the suds until it was clean and white

p.6



After that, a little bit of me (you might say) was hung up in the sun to dry. When my wool was dry, Glennae took out two large square combs with many teeth

p.7



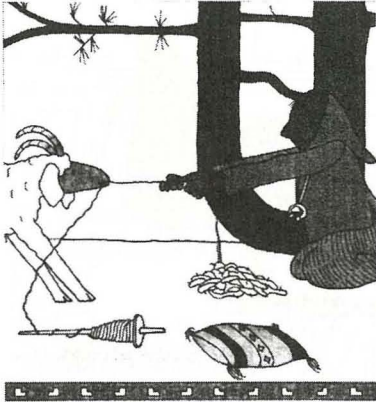
By combing my wool between these carding combs, as they're called, she removed any bits of twigs or burrs and straightened out the fibers. She told me it helped make a smoother yarn for spinning

p.8



Then, Glennae carefully started to spin my wool—one small bundle at a time—into yarn. I was beginning to find out it takes a long while to make a Navajo rug

p.9



Again and again, Glenmae twisted and pulled, twisted and pulled the wool. Then she spun it around a long, thin stick she called a spindle. As she twisted and pulled and spun, the fiber, stronger and smoother the yarn became.

p.10



A few days later, Glenmae and I went for a walk. She said we were going to find some special plants she would use to make dye.

p.11



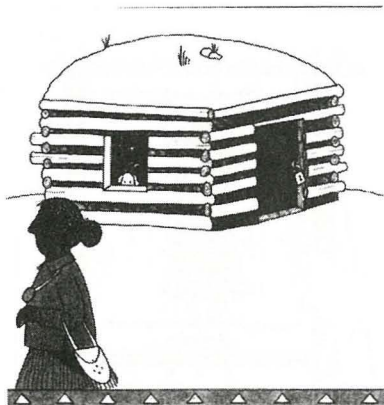
I didn't know what "dye" meant, but it sounded like a picnic to me. I do love to eat plants. That's what got me into trouble.

p.12



While Glenmae was out looking for more plants, I ate every one she had already collected in her bucket. Delicious!

p.13



The next day, Glenmae made me stay home while she walked miles to a store. She said the dye she could buy wasn't the same as the kind she makes from plants, but since I'd made such a pig of myself, it would have to do.

p.14



I was really worried that she would still be angry with me when she got back. She wasn't, though, and pretty soon she had three big pots of dye boiling over a fire.

p.15



Then I saw what Glenmae had meant by dyeing. She dipped my white wool into one pot... and it turned pink! She dipped it in again. It turned a darker pink! By the time she'd finished dipping it in and out and hung it up to dry, it was a beautiful deep red.

p.16



After that, she dyed some of my wool brown, and some of it black. I couldn't help wondering if those plants I'd eaten would turn all of me the same colors.

p.17



While I was worrying about that, Glenmae started to make our rug. She took a ball of yarn and wrapped it around and around two poles. I lost count when she'd reached three hundred wraps. I guess I was too busy thinking about what it would be like to be the only red, white, black and brown goat at Window Rock.

p.18



It wasn't long before Glenmae had finished wrapping. Then she hung the poles with the yarn on a big wooden frame. It looked like a picture frame made of logs—she called it a "loom."

p.19



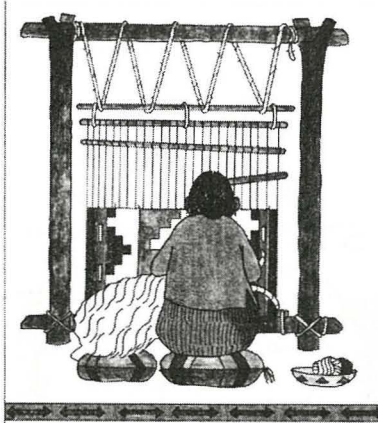
After a whole week of getting ready to weave, Glenmae started. She began weaving at the bottom of the loom. Then, one strand of yarn at a time, our rug started growing toward the top.

p.20



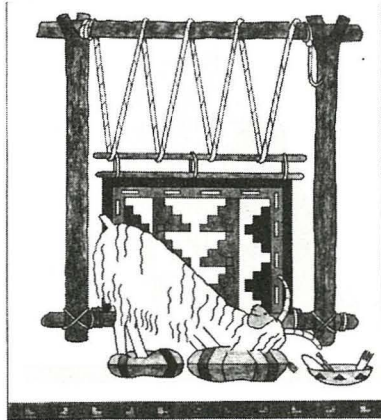
A few strands of black
A few of brown
A few of red.
In and out. Back and forth.
Until, in a few days, the pattern of our rug was clear to see.

p.21



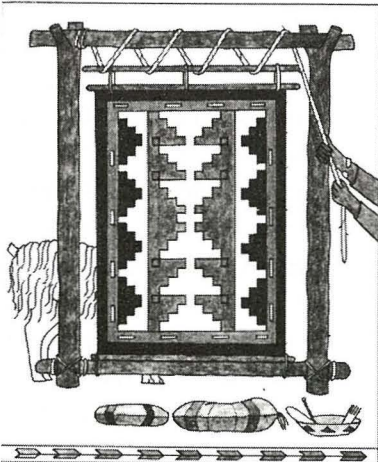
Our rug grew very slowly just as every Navajo weaver before her had done for hundreds and hundreds of years, Glenmae formed a design that would never be duplicated.

p.22



Then, at last the weaving was finished! But not until I'd checked it quite thoroughly in front...

p.23



...and in back, did I let Glenmae take our rug off the loom.

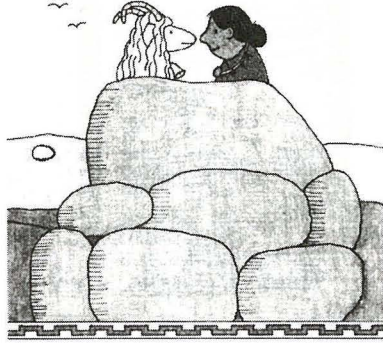
p.24



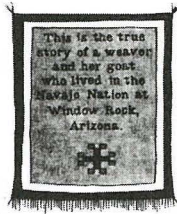
There was a lot of me in that rug. I wanted it to be perfect. And it was.



Since then, my wool has grown almost long enough for Glenmae and me to make another rug. I hope we do very soon. Because, you see, there aren't too many weavers like Glenmae left among the Navajos.



And there's only one goat like me, Geraldine



The questions in the reading comprehension test:

- 1) Geraldine is _____
(Geraldine はどんな人物か)
- 2) Glenmae is _____
(Glenmae はどんな人物か)
- 3) Window Rock is called "Window Rock" because _____
(Window Rock と呼ばれている理由)
- 4) Glenmae sharpened a large pair of scissors because _____
(ハサミを使う目的)
- 5) Glenmae chopped up the roots from a yucca plant because _____
(ユッカの根の用法)
- 6) The words, "lather" and "suds" mean _____
注：この2語は、ほぼ同じ意味になります
- 7) Glenmae used two carding combs because _____
(carding combs を使う理由)
- 8) Glenmae and Geraldine went for a walk because _____
(散歩に出かけた理由)
- 9) The trouble during their walk was _____
(散歩中のトラブル)
- 10) Glenmae walked to a store alone because _____
(その次の日 Glenmae が一人で出かけた理由)
- 11) While staying home alone, Geraldine felt _____
(一人で留守番をする Geraldine の心情)
- 12) While Glenmae was dyeing the wool, Geraldine was wondering about _____
(Glenmae の染色中に Geraldine が思いめぐらしていたこと)
- 13) Glenmae formed a design that would never be woven again because _____
(Glenmae が二つとないデザインのラグを作る理由)
- 14) Glenmae and Geraldine will make another rug because _____
(二人が再びラグを織る理由)
- 15) This story tells us _____
(物語のテーマ)