THE USE OF SCHEMATA IN READING COMPREHENSION: A CASE OF LEARNERS' READING PROBLEMS

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Abstract: The Use of Schemata in Reading Comprehension: A Case of Learners' Reading Problems. Schemata have an important role in the process of reading. It is almost impossible for a person to read without utilizing schemata. This study aimed to find learners' reading problem in terms of using schemata. A group of second year students of English Department of State University of Malang were involved in this study. As a case study, an interview, observation, and test were used to collect the data. The study reveals that the main reading problems were lack of background knowledge, over-reliance on background knowledge, and lack of background knowledge activation. In the process of reading, learners' background knowledge should be activated. Without optimal activation, the process of reading does not reach satisfactory results. It is also suggested that learners should not be over confident in getting the meaning from the text. Over-reliance on background knowledge might lead to misinterpretation.

Keywords: reading comprehension, schemata, reading problem.

Reading, as widely known, is getting meaning from printed materials. Meaning itself is not conveyed by the purely physical aspects of language, that is, sound or printed symbols. The meaning of individual words is dependent on the shared understanding of those who speak the language (Harris & Smith, 1986). That is to say, meaning is obtained not only merely from printed symbols but also beyond the printed words. In other words, when reading a reader uses his knowledge about the topic being read or schemata (background knowledge) in order to get the writer's intended message.

A schema is a data structure for representing the generic concepts stored in memory (Rumelhart, 1980: 34). Of the same view, Wolf (1987: 309) states that a schema is an abstract textual structure that a reader makes use of to understand a given text. In other words, schema is an abstract structure or concept stored in memory based on the people's experience and knowledge. It is a structure in the sense that it represents the relationships among its component parts. Schemata are the building blocks of cognition. They are fundamental elements upon which all information processing depends (Rumelhart, 1980: 33).

A schema theory is basically a theory of background knowledge. It is a theory about how knowledge is represented and about how that representation facilitates the use of the knowledge in particular way (Rumelhart, 1980: 34). Thus, it can be inferred that all knowledge is grouped into units which are called schemata.

According to this theory, schemata or background knowledge are used to make sense of a reading text. It is intrinsic to a reader that every reader can have different concepts: those underlying objects, situations, events, sequences of events, actions, and sequences of actions. This schema theory embodies a prototype of theory of meaning (Rumelhart, 1980: 34). This schema or background knowledge serves as scaffolding to aid in encoding information from the text (Stahl *et al.* 1989). This implies that a person who has more background knowledge is able to comprehend better than those who have less background knowledge.

Thus, it is widely known that of the factors that have been found to affect reading comprehension, one is a reader's schemata. They are used by a reader to make sense of a text. At this stage, the printed words evoke the reader's experiences. As a result, when reading takes place, the reader's schemata have to be activated. This is in line with what Cerrell (1983) claims; she explains that the ability

to comprehend a text is largely depends on the extent to which background knowledge is activated during the mental process of reading. This activation can be done through two sources, top-down and bottom-up. Top-down activation refers to the activation which is conceptually driven which means the activation begins from something general and goes to something specific. In contrast, bottom-up activation refers to the activation where the data driven starts from parts to the whole or from something specific to something general.

It should be taken into account that each reader has different background knowledge; and, therefore, every reader might have different perception towards what is being read. Schemata, according to McNeil (1998:19) are readers' concepts, beliefs, expectation, and processes – virtually everything from past experiences that are used to make sense of things and actions. Thus a schema is an abstract knowledge structure and it is stored in our mind. It is often assumed that reading failure is partly due to the lack of background knowledge or experience. In some cases, the students could not relate their linguistic knowledge to background knowledge.

Experience shows that the factors that lead to students' failure in reading, especially in terms of the role of schemata, are not clear. This study is aimed at finding and describing students' reading problems in the use of background knowledge. Specifically, this study seeks to answer this main question: What are the students' difficulties in reading English texts especially in using or activating background knowledge?

METHOD

Forty students of the English Departement of State University of Malang were involved in this study. They were taking a course called Reading Comprehension I. It was assumed that some reading problems could be elicited from the students. Most of the data on reading problems were obtained through long and deep interviews by using both retrospective and concurrent interviews. The interviews were basically based on the result of reading tests and classroom observations in the form of field-notes as to find the student's problems. The observation took place during the second term of Reading Comprehension class. The data analysis was done by changing the oral interview into written form, that is, the recorded data in the form of audio tape recording was transcribed into written form. These data were combined with other data from field-notes and a test for triangulation. Field-notes were undertaken during the process of teaching in the class and were aimed at collecting data dealing with the use of background knowledge. while the test deals with how background knowledge was used and activated. The test was done twice with different formats; the first test provided contexts, whereas the second did not. This was done to see if there was any difference between the two processes of reading.

RESULTS

Referring to the objectives of the study the findings can be identified in three categories: is lack of background knowledge, reliance on background knowledge, and reading problems in terms of activating background knowledge. Firstly, it was found that a lack of vocabulary and background knowledge became the learners' reading problems. Two students in extracts 1 and 2 below mentioned that their main problems when they read were vocabulary and background knowledge. It seems that these two factors are interrelated. Difficult word implies that the students do not have any information about the word, for example, culturally bound words in the form of idioms. In fact, English idioms are actually transferable into Indonesian even though some are untranslatable (Herlina, 2008). In this case, the students did not have enough background knowledge or knowledge of the world.

Extract 1:
R: Secara umum sekarang gimana? Aaa kalau membaca ya kan sering sulit, faktor apa yang menyebabkan?
D: Ya kalau menurut saya faktor vocabnya itu pak. Vocabularynya, terus kemudian pengetahuan kita terhadap latar belakang dari pengetahuan terhadap teks itu kan kita nggak, tidak mengetahui seperti ...seperti baca Linguistik itu pak; itu kan sulit sekali gitu. Walaupun kita baca beberapa kali gitu, tapi kita tidak menemukan apa yang yang dimaksud gitu pak.
R: Jadi yang pertama vocab, terus yang ke dua topik bacaan
D: Ya. Jadi kalau misalnya kita mau menebak kata ini yang berhubungan dengan ini, itu sulit; jadi, biasanya kalau kata ini secara umum berhubunghan dengan ini, tapi di dalam konteks, tidak tidak seperti itu; mungkin berhubungan dengan hal yang lain. Artinya kan banyak, gitu pak (I10/2/33- 44).

Extract 2
R: Kalau Dian, bagaimana faktor-faktor yang.. tadikan saya tanya kalau baca. Aa... faktor yang me.... membuat.. kita sulit memahami teks.
D: Yang pertama itu sama, vocab, vocabularynya aaa... kita kalau jadi terhambat membaca sesuatu gara-gara

vocabnya tidak mengerti semua. Yang ke dua, juga backgroundnya. Kita membaca bacaan, kita baca humor terutama soal Amerika itu; kita akhirnya itu kita tidak nyambung.

R: Itu menyangkut budaya orang lain, bangsa lain. Contohnya itu. Tapi kita nggak nyambung jadi kita nggak ketawa.

D: Iya. (I10/3/7-15) (Note: R=researcher; D= student)

The student in extract 1 mentioned that besides having limited knowledge of vocabulary, he or she also had limited knowledge or experience about the topic being communicated. This condition makes the student have difficulty to identify clues to guess the meaning of unfamiliar words.

Extract 2 shows almost a similar case. The student illustrated that due to limited knowledge of reading topic (background knowledge); she could not enjoy a funny or humorous story. She explained that she could not find the part which was supposed to be funny as in most of the expressions seemed to be culturally bound.

Furthermore, extract 3 gives a clear example of how background knowledge plays an important role. The text that is discussed in the extract concerns *The Unsinkable Titanic*. This text was considered difficult for the students because they did not have enough background knowledge to read it. According to the students, the text would not be so difficult if the readers had seen the film about Titanic. The film could provide enough background knowledge that could help the readers to understand the text.

Extract 3

D: Kalau saya gini *The Unsinkable Titanic* saya kan nggak mengetahui latar belakangnya kapal itu lho, seperti apa bagian-bagiannya.

F: Itu kalau yang nggak pernah lihat film Titanic itu kebingungan. Tapi yang udah pernah liat film Titanic masih bisa membayangkan. (I10/6/45-46 - 7/1-2); (Note: D= student 1; F=student 2)

This phenomenon is confirmed by a student as illustrated in extract 4. He said that a passage could be considered easy or difficult depending on whether the topic of the passage was familiar or not. A passage was easy if the topic was familiar to the reader and it did not need much effort to understand it. That means the ideas in the passage are not complicated. According to the student, the text entitled *Christmas Presents* was considered an easy text because it was interesting and it could entertain the readers. The organization of the ideas was easy to follow; the vocabulary in the passage was also common in daily life activity, etc. All these mean that the students already had enough background knowledge to retrieve into the vocabulary in the passage being read.

Extract 4

R: Jadi Christmas Present sudah dibacakan, ya? Ternyata menurut Sugeng mudah ya? dibandingkan dengan yang lain; kenapa itu?

S: Ya mungkin karena faktor bacaan yang menghibur gitu pak ya, apa.. ya.. nggak membutuhkan ya.. pemikiran yang ruwet gitu. Ini kan aa.. selain urutannya juga pas... bisa diikuti, kemudian juga terus kata-katanya agak mudah, "common" gitu pak (terus) terus ya... (kejadiannya, kejadiannya tidak asing gitu) Ya kejadiannya mungkin sehari-hari anu, sering dialami.

R: Nggak seperti kalau vaseline?

S: Iya. (I5/8/10-16) (Note: R= researcher; S= student)

In contrast, the text on *Vaseline* was considered difficult to read, because according to the student, the text is scientific in nature. To read this text needs more effort in order to follow the ideas. This was also stated by the student in extract 5. Compared to the text on *English while You Sleep*, *Vaseline* was more difficult. According to the student, his background knowledge did not really support the process of reading of such a kind of text. He asserted that he did not like reading such scientific text, especially the texts that deal with research like *Vaseline.*

Based on the rank order of the text readability list, *Vaseline* is much more difficult than *Christmas Presents* and a bit more difficult than *English while You Sleep* (Sutarsyah, 2000).

Extract 5

R: Diantara teks-teks yang sudah dipelajari, itu ada berapa, sekitar sembilan, ya, Christmas Present belum ya? Itu yang paling sulit yang mana kira-kira?

S: Yang... aaa... Rod... Vaseline ini pak.

R: Oo ya yang vasline, vaseline ini ya. Menurut Sugeng itu kenapa? Ko sulit kalau dibandingkan dengan yang lain, umpamanya.. apa ya.. yang mudah apa? yang paling mudah?

S: English While you Sleep.

R: Ooo iya English While you Sleep itu kan mudah ya? Tapi kalau yang... teks Vaseline itu sulit?

R: Kira-kira apa yang menyebabkan sulit?

S: Kesulitannya karena sesuai latar belakang saya, saya tidak suka pelajaran ilmiah.

R: Oo jadi memang latar belakang tentang pengetahuan topik itu, Vaseline... itu kurang ya?

S: Ya kurangnya bacaan, pengetahuan tentang ilmiah yang menyebabkan aa... saya sulit memehami teksnya itu; yang terutama bahasa Inggris.

R: Mengenai penelitian ya.

S: Ya penelitian ilmiah. (I5/4/14-28) (Note: R= researcher; S= student)

Lack of Background Knowledge

The following discussion deals with how the students with limited background knowledge had difficulty understanding a text. The data that have been

accumulated show that most students' reading problem is due to the lack of background knowledge. Three extracts have been selected and prepared to illustrate this. Extract 6 shows how the student had difficulty to understand such a short passage, entitled *U Nu: I shall Return*. The extract shows that the student knows most of the words in the text such as, *runner*, *boatman*, *sympathizers*, but he could not imagine how the words were used and what the story was about. He was confused with the word *runner*, whether it was an ordinary sportsman or others; if yes, how it could be done. At the same time, he could not think how a person was in exile. Thus, for the student, it was difficult to understand the text that was incompatible with his background knowledge.

Extract 6

R: "This text" he wrote "is being prepared in Burma. Our postal service will convey it by runner and river boatman to sympathizers out side.." what aa... masalahnya apa?

H: What runner means here? Apa runner?. Apa pelari, atau apa, *boatman*; *boatman* itu yang bagaimana, memberikan informasi terhadap simpatiser di luar. Jadi ini maksudnya gimana, runner yang gimana? Jadi, membahasnya itu sulit.

R: Jadi aaa...teks ini sulit atau karena belum.. belum ada gambaran?

H: Yaa. bisa karena belum ada gambaran. Terus disamping itu ada juga karena kesulitan dalam, oh ini maksudnya bagaimana? sehingga saya tak punya gambaran ini maksudnya, maksud yang sebenarnya adalah begini. (I3/3/9-17) (Note: R= researcher; H= student)

Furthermore, extract 7 which deals with a student's work on Mid Test, text 1, *The Sinking of Colossus*, provides an interesting data. The student mentioned that the exercise on ordering the events was a very difficult task. She said that she answered the exercise monotonously; meaning that, according to her she could not relate the topic with her knowledge. That is to say, she did not have enough knowledge about the topic discussed in the text, so that she had difficulty to arrange the events. It is difficult for her to know the process of the accident that happened to the ship, for example, the idea of which events came first, hitting an iceberg or sailing into fog.

Extract 7

R: Dari teks ini mana yang paling sulit?

N: Itu untuk yang B itu lho pak. Yang teks pertama... yang B

R: Teks yang pertama yang B. Oo.. *ordering*, menyusun?

N: Ya. *Put these event into their order of happening*. Terus... itu ... itu lagi pak kalau saya menjawab ini saya terlalu monoton pada ini.... pada teksnya gitu lho pak.

R: Maksudnya monoton gimana?

N: Aa.. saya tu nggak memiliki pandangan lain gitu, Tidak... I have no idea with, no idea, cuma monoton pada teksnya.

R: Aa... maksudnya anda tidak melihat pengetahuan, pengetahuan tentang ...

N: Ya pengetahuan

R: Tidak menghubungkan ya?

N: Ya, cuma langsung hanya pada teks sendiri.(I7/1/5-15) (Note: R= researcher; N= student)

Logically, the ship hit an iceberg because there was fog in front of it. The iceberg could not be seen because it was blocked by the fog. This kind of information is not provided in the text, but it should be in the reader's mind as reader's background knowledge. With appropriate background knowledge, the student can logically arrange the ideas. For example, the students can arrange these ideas: *sinking – hitting an iceberg – sailing into fog*, etc, without looking at the text. In fact, such process is beyond the student's knowledge.

Finally, a similar case can also be seen in extract 8. The student's problem is in reading a new material or a text with a new topic and he had a difficulty to relate the topic to his knowledge.

Extract 8

R: Secara umum kesulitan membaca yang dialami apa dari Heli?

M: Kalau saya? In English or Indonesian?

R: Up to you

M: It is difficult for me to relate new material that I get with a knowledge that I know

R: Oooo menghubungkan topik bacaan dengan pengetahuan....

M: Ya pengetahuan lama saya yang pernah baca dan berhubungan dengan topik aa... dengan topik yang sedang dipelajari sekaranng ini, sebgai contoh waktu Christmas Present (I8/1/33-38) (Note: R= researcher; M= student)

Based on above description, we can find that the students had something in common. They had difficulty to read a text of unfamiliar topic. When they read familiar and interesting topic, they did not have much difficulty.

Too Much Reliance upon Background Knowledge

As it has been discussed, according to the interaction model of reading, a reader's background knowledge plays an important role in the process of comprehending. Not only is the reader's prior linguistic knowledge, but the reader's prior background knowledge of the content schemata are important.

However some cases show that many readers take too much reliance on the use of background knowledge and content schemata and neglect the lin-

guistic knowledge. Some of the readers use this type of reading unconsciously. They may think that they do not neglect their linguistic knowledge, such as grammar, vocabulary, etc.

The data show that many students were found to use their background knowledge too much. Too much reliance on background knowledge here means that the reader tends to neglect the other mode, that is, linguistic factor. In this case, the reader attempts to process in a totally top-down fashion and avoids decoding strategy, the use of linguistic knowledge. This overreliance causes misinterpretation of what they read. Four extracts had been prepared to illustrate this case. In extract 9 (has been quoted), the student was dealing with a text on Henry's Interview. The trouble spot occurs in paragraph one as stated below.

The manager waved his hand towards the chair on the other side of the desk and told Henry to take a seat.

The student in this extract interpreted the word "waved" differently. According to him, when Henry came, the manager was sitting on a chair; his hands were lying on armchairs. He even insisted on saying that the verb "waved" (giving gesture) does not mean asking Henry to take a seat. It is true that according to him, the manager asked Henry to take a seat as seen in the clause *told Henry to take a seat*. The correct one is that the manager told Henry to take a seat and also gave gesture (signal) by using his hand and which also means asking Henry to take a seat.

Extract 9

S: Nggak, Kalau mempersilahkan duduk ya ini kata-kata *told Henry to take a seat*. Kalau yang pertama ini pemahaman saya dulu itu ya aa.. prilaku managernya

R: Ia memang, tapi dia sebenarnya ia menyambut Henry itu untuk.

S: Aa.. maksudnya "wave" tadi menyandarkan tangannya gitu lho pak

R: Dari mana "wave" itu wave itu kan melambaikan tangannya

R: Jadi maksudnya disamping dia mempersilahkan duduk, dia juga dengan gerakan itu lho .. Ini yang tadi "wave" disinikan maksudnya menurut pemahaman Sugeng gimana kok menyandarkan tangan.

S: Maksudnya itu biasanya tangan meneger itu tangannya disandarkan gitu pak, *towards the chairs*. Jadi misalkan ini ayunan artinya pak ya, menyandarkan diri sambil menyuruh Henry duduk.

R: Ooh kalau gitu aa.... ini mungkin Sugeng ini nggak melihat konteksnya yang lain, kurang melihat situasinya kan (I5/6/1-12) (Note: R= researcher; S= student)

Another clear example of overreliance upon background knowledge can be seen in extract 10. It deals with the student's record on doing a test, Text 2, (True/False). The statement on item 14 says, *He knew the reference library from an advertisement on a paper*. In his answer, the student considered the statement was true. In fact, the information in the text indicates that the statement was wrong even though it is not stated explicitly. The text does not say that the advertisement mentions or explains the location of reference library, the part of the library. But the student's thought was beyond the text and thus affects his comprehension.

Extract 10

R: What is the answer, question No 14?

H: He knew the reference library from an advertisement on a paper. True

R: He knew the reference library from an advertisement on a paper. Your answer is True, but the correct answer is False. Why do you answer that?

H: Aaa.. according to this.. aa ... according to the second paragraph: Henry had come about a job in the reference library, for which he had seen an advertisement in the paper. That is according to ...

R: He knew the reference library? He knew well? The situation, the place? But the advertisement says only the...

H: There is vacancy for them (I6/3/1-10) (Note: R= researcher; H= student)

The next extract 11 is even more interesting to look at how a student relied too much upon her knowledge when reading a text in Mid Test, Text 1 (*The Sinking of the Colossus*) and doing questions on item 8 and 9. In this extract, the student could not imagine how a ship hit an iceberg and sank.

Extract 11

R: Terus nomor ini... Why did the Colossus hit the iceberg?

N: *Too close* dengan *iceberg so...* itu lho karena dekat langsung nabrak.

R: Karena apa? Karena kapalnya terlalu dekat?

N: Too close with iceberg.

R: Is it in the text? (laughter).Itulah..... jadi.... Do you know the fog? Apa *fog*? (No answer) Nggak tahu ya? Fog, Foggy, Foggy

N: Iya heeh... Pokoknya kaya timbunan, gitu lho

R: Foggy .....

R: Number 9, Why?

N: Terlalu muda

R: Terlalu muda?

N: Iya

R: Why were the woman and children allowed to go first?.. *Too young* ya?

N: Keluarga gitu lho pak masih, karena terlalu muda

R: Yang muda didulukan

N: Ya didulukan. Masa depannya gitu pak

R: Itu kan jawaban secara "anu" secara umum. (I7/2/31-46) (Note: R= researcher; N= student)

According to her, the ship hit the iceberg because she was too close to it. Her answer is really

based on what she thought and on her knowledge about the topic, but she was quite sure with her answer. According to a common sense, it is logical to say so, because if the ship was too close to something that blocked her and there was no time to avoid it, the accident would happen. However, the text does not mention like this. The accident happened because there was fog in front of the ship.

Again, in her explanation, she said that "fog" is something like *timbunan*, a big heap. This is really a wild guessing. Perhaps, she thought something that can block the ship was something like a big heap (*timbunan*).

Still in the same extract, the student answered item 9 as the following,

The question: Why were the women and children allowed to go first?

Her answer : Because they were too young

The answer is not completely correct. It is true that according to the text women and children (young people) were allowed to go first from the ship. It is also true that the writer was safe because he was young (being only a boy of fourteen, line 7). But *too young* is clearly not the right answer to the question. In fact, the law or the custom required that the women and children should be saved first. Thus, the student answered simply based on what she thought and what she knew about the topic.

The last extract (12) still illustrates the problem and it was derived from the students' work on reading exercise from the text of *My Bank Account*. The students in the class were doing exercise on Part 1, multiple choice test. Four answer sheets were taken as a sample. The result was presented on the table and presented in this extract. Of the eight items, item F is related to this topic discussion, that is, too much use of background knowledge. The item asks the meaning of the expression: *What! Are you drawing it all out again?*

This item (item F) was answered wrongly by three students; two students chose option A and the other one chose option C. Option A is basically wrong in that it is not the meaning intended by this expression. The expression does not ask how much money, but it is a kind of surprising expression which means *Do you really want all the money back again?*

Extract 11

The result of the students' work (4 students)

On item F (of the test) most students answered option A and C

Item F:

"What! Are you drawing it all out again?" means...

a) How much money do you want me to give you?

b) Do you really want all the money back again?

c) Are you going to write the cheque again?

d) Why have you drawn a picture on the cheque?

Based on the analysis of students' work on this item, we can easily see that the students had made wrong interpretation of the word *draw* or *draw out*, *draw it out*. *Draw out* is actually an idiom, which is commonly used in banking. The students who answered option C thought that *to draw* meant *to write*, even though it is true that when one takes some money out, he has to write on a cheque (to draw out). But this answer is not the real meaning as to show the feeling of surprise. What the students did in answering reading exercise may be called over generalization based on his background knowledge because the text mentions: *Then I want to draw a cheque*. In this case, they used their own interpretation based on what they thought.

Clearly, reader's prior knowledge of the content schemata is important. It influences the process of getting meaning from the text being read. In this case, every reader may have their own interpretation because they have different experience. The data show that most students read with their background knowledge but many of them relied too much upon their background knowledge about the topic being read. The data show that this condition could interfere and distract their comprehension. This finding is in line with what Cerrell (1992c) claims. They state that overreliance on either top-down or bottom-up strategies has been found to cause reading difficulties for second language readers.

Activating Background Knowledge

As it has mentioned, one of the tests was used to identify students' reading problem in terms of their background knowledge. This kind of background knowledge identification has been done by many experts, for example, (Cerrell (1983). On the other hand, previous discussion showed that reader's background knowledge or prior knowledge played an important role in the process of reading. However, many people claim that the availability of this background knowledge in the reader's mind cannot really help the reader without activating it. Cerrell (1983) asserts that the ability to understand texts is based not only on the reader's linguistic knowledge, but also on his general knowledge of the world and the extent to which that knowledge is activated during the mental process of reading.

This part will look at to what extent that activating background knowledge is important for the students when they read a passage. If it is the case,

then we can suspect that most students' reading failure is due to the lack of activating students' content schemata. This part also identifies and describes the result of the test on activating student's content schemata or the knowledge of the topic of a text.

For this purpose, a set of a test was prepared to see how comprehension was influenced by the activation of relevant knowledge. The test adapted from Bransford and Johnson (1998) was used. The test consists of one short passage which is called opaque version, that is, the text which is not really transparent, and a context picture. A series of comprehension rating, recall rating, and comprehension questions were used in the test. The test consisting the passage and the series of questions was given twice; the first one was given without a context picture; the second, with context picture and with different answer sheet. The following is the passage used in this test.

> If the balloons popped, the sound would not be able to carry since everything would be too far away from the correct floor. A closed window would also prevent the sound from carrying since most buildings tend to be well insulated. Since the whole operation depends on a steady flow of electricity, a break in the middle of the wire would also cause problems. Of course the fellow could shout, but the human voice is not loud enough to carry that far. An additional problem is that a string could break on the instrument. Then there could be no accompaniment to the message. It is clear that the best situation would involve less distance. Then there would be fewer potential problems. With face to face contact, the least number of things could go wrong. (Bransford and Johnson, 1998)   (133 words)

The students were asked to read the passage with comprehension and were told that they had to recall what they had read. Based on six point scales (where 6 indicates highly comprehensible and completely easy to recall), the students were asked to rate it for comprehensibility of the passage and to rate how they could recall it. The four essay questions were made to get significant results, that is, to accomplish the rating scale test. Thus, as has been mentioned, each student got two answer sheets which were given at different times. The first answer sheet was used to answer the questions without context picture and the other one with context picture. When the first test had been finished, all the answer sheets were taken out and collected. Then, the second test with different answer sheet accompanied by context picture began. That means, the students at the second stage did the test by looking at the picture that de-

scribed the topic. Therefore, the results of the test were divided into two types, with label *No Context* and *Context After*.

The results of the students' answers on rating scale is provided in Table 1. The tables shows that there were 22 students participating in this test. Other information tells the average scores (mean) for each rating for both comprehensibility and recalling. The lowest scores (LS) and highest scores (HS) for each rating are also provided. As might be expected *Context After* scores are higher than *No Context* scores, but we are concerned to what extent the scores are higher than the others.

Table 1. The Result of the Test on the Role of Schema Activation

	No Context		Context After	
	Comprehension rate	Recall rate	Comprehension rate	Recall rate
N	22	22	22	22
Mean	2.27	2.20	3.86	3.64
LS	1	1	3	2
HS	3	3	5	5

The average scores of comprehension and recalling in *No context* test are 2.27 and 2.20 respectively. That means the students' ability to comprehend and to recall the passage in *No Context* test is very limited. That is to say, the students thought that the passage was *very incomprehensible* and *rather difficult* to recall. Whilst, the average scores *of Context After* for both comprehension and recalling are 3.86 and 3.64 respectively. These figures mean that the students' ability to comprehend and to recall the passage in *Context After* test is good enough, that is, *comprehensible enough* and *almost easy to recall*. These figures tell us that before they were provided with context picture the text or the passage was considered very difficult to understand and to recall.

Other information is on the range for both *No Context* and *Context After*. These two scores are quite different. The range scores in *No Context* for both comprehensibility and recalling are between 1-3 (*completely incomprehensible/very difficult to recall* and *very comprehensible/very easy to recall*). The table also shows that these scores increase in *Context After* for both comprehensibility and recalling, that is, between 3-5 and 2-5 respectively which mean *incomprehensible - very comprehensible* and *rather difficult – very easy to recall*. The figures also shows the ability to recall ideas in the passage is a little more difficult than to comprehend.

The analysis above implies that the same passage becomes quite comprehensible if a reader is supplied with an appropriate knowledge framework or context. In other words the ability to comprehend and to recall increases when their prior knowledge is activated by providing context picture or anything related to the topic discussion and describing the ideas discussed in the text.

The data from comprehension questions show a similar results. That is to say, the students' answers on comprehension tests before and after having context picture is quite different. All of the answers in the *No Context* comprehension are not acceptable. In contrast, all answers in *Context After* questions are satisfying.

Their answers are acceptable based on the message conveyed by the text. It was laso found that this type of students' answers are different in all four questions. In other words, there is a big gap between the answers in *No Context* and those in *Context After*.

Question 1 asks about the referent of the word *sound* as occurs in the sentence:

> If the balloon popped, the sound would not be able to carry since everything would be too far away from the correct floor.

All students, in *No Context* questions, gave wrong responses. Surprisingly, 19 students answered the questions as *The sound of the popping balloon*. The rest answered that the referent for the word *sound* is *voice*, *exploded sound*, *the sound of everything*. Basically all answers are the same in a way that they could not catch the main idea of the passage.

It seems that most students were so sure that the answers were true, that is, the sound of the popping balloon. If the student read intensively, they would find that *the sound* was the main idea of the passage. The sound was treated as an important topic and discussed through out the text. For example, the text discussed some possibilities of transferring this sound. Thus, the sound of the popping balloon is not important because it was so naive to transfer the sound of the popping balloon with some possibilities.

The same case occurred in the next three questions (questions 2, 3 and 4). Most students answered *I don't know* in the *Non Context* question, that is, 9, 6, and 11 students. That means they did not have any idea to answer the questions or the text is too difficult to understand. In question 2, eight students answered *The place of the building where the balloon popped*. This wild guessing is basically the same with the answer on question 1 (No Context) where the student still focused on the popping balloon. While

in question 3, five students answered *The process of popping balloon*. The other answers are basically wild guessing. In fact, the students' answers on four questions are basically similar in that they concentrated in the process of popping balloon.

On the next test, the student's answers surprisingly improved when they were provided with context picture. In spite of variety of answers, they were actually true in that they were based on the main idea of the topic. In question 1, for example, 15 students answered *The sound of a man who is singing and the sound of a guitar that he plays* and *the sound music and human voice (singing)*. This answer is quite different from that in *No Context* answers, that is, *the sound of the popping balloon*. In question 2, students answered *The floor where the girl stays, the floor that is wanted by the singer*, etc. The answers, in question 3 and 4, are all acceptable.

Based on the above analysis, we can answer the questions: Why is the balloon passage so incomprehensible when presented in isolation? How does it become comprehensible when one is provided with context picture? It is proved that pictorial information provides a basis for interpreting the words or phrases that the passage contains. At this point we can identify how the students changed their answers from the popping balloon to the song and music played by a man. When the students read the context of the appropriate picture it becomes clear that the theme centers around a unique problem of communication between a modern Romeo and young girl.

In short, the results of this comprehension test show that the ability to comprehend a text is much better when reader's prior knowledge is activated. This is shown in the students' answers on comprehension questions before and after context picture was given. After the students were given a context picture as a means of activating their background knowledge, they could give a correct response to the questions. The result of comprehension question is in line with those of rating skill test that has been discussed previously.

Finally, it is safe to say that the ability to comprehend largely depends on how much the reader's background knowledge can be activated. Based on this discussion, we can take a stand that the students' reading failure is suspected by the lack of effort to activate their background knowledge.

CONCLUSION

The study identifies and describes the students' problem in terms of their background knowledge. Based on the data, the students believed that the avail-

ability of background knowledge is important in reading. They also realized that the lack of background knowledge could really hinder their effort to understand a passage. According to the students, the main problem of their reading difficulty is due to the unfamiliar topic of a text, so that they did not have enough knowledge used to understand the text.

Based on the data, the identification of students' problem in terms of background knowledge is classified into three categories. First, the students did not have enough background knowledge in order to read a passage. The data show that the students had something in common when they had difficulty to read a passage, the main problem was the lack of prior knowledge, that is, the knowledge or experience about the topic being discussed in the passage. However, a text becomes easy to read for the students when the topic of a passage is familiar to them in a way that it does not deal with specialized field that is beyond the students' knowledge.

Second, when reading, the students relied too much upon their background knowledge. The data show that some students (if not most) unconsciously neglected their linguistic knowledge and relied too much upon their content schemata or experience. Thus, this overreliance on background knowledge (top-down process) influences the process of getting meaning from the printed materials and it leads to misinterpretation. In this case, these students experience overconfident to what they read and in many cases, it becomes the main reason of reading failure.

Third, the study deals with the students' problem in activating their background knowledge. The data from the test show that the students' background knowledge needs to be activated. In order to have a satisfied

reading achievement, reading should be done interactively to real life activities (Herrini, 2008). Thus, in line with what Cerrell (1983) says, it is said that the ability to read depends to what extent the reader's background knowledge is activated during the mental process of reading. That is to say, without optimal activation of prior knowledge, the process of reading does not reach satisfactory results.

Based on the data, the students who read a passage after their background knowledge was activated performed better than those who had not been activated. In short, the study reveals that reader's background knowledge plays an important role in reading. Comprehension depends on how much the availability of content schemata is activated. It also depends on the extent a reader uses his background knowledge. That means the reader is expected to use his background knowledge purposively and proportionally.

The data on the problems of background knowledge show that the learners appear to have three problems, that is, lack of background knowledge, students' reliance on background knowledge, and activating background knowledge. The data show that limited and inactivated background knowledge do impede comprehension. Besides, it was also found that the students tend to use totally top-down fashion.

Finally, this study tends to confirm the findings of previous studies on reading problems, such as done by Harris and Smith (1986), Adams (1980), Nation (1990,1998) and Cerrell (1992a, and 1992b). The problem on background knowledge really exists. Since the previous studies do not seem to reach into more detailed problems of reading, the findings of this investigation can complete those studies.

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