Inference in Reading Comprehension of National Examination English Text

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Abstract

Reading comprehension has the highest proportion in National Exam English Text (NEET). Inference dominates and it is considered as one of the difficult questions. This research aims to identify the forms of inference question and the process of how students make inference. The writer used qualitative descriptive research. The writer used students’ recording of interview as the primary data and the script of NEET as the secondary data. The writer used document study, observation, and interview in collecting data. The questions were dominated by drawing conclusion. The easiest question was about referential and the most difficult question was about synonym/closest meaning (inferring meaning of word). In the process of making inference, students tended to do seven steps, but these steps showed that students did not follow the actual rules of making inference. It happened because they did not start from understanding the text firstly, but most of them used to start from understanding the question and multiple choices firstly.

Keywords: Inference, Reading Comprehension, English National Exam

Introduction

English National Examination (ENE) of Senior High School (SHS) consists of three skills to test. They are listening (30%), reading comprehension (60%) and writing (10%) as stated in the curriculum of 2013. From those percentages, it can be obviously said that reading comprehension has the highest proportion of all. In reading comprehension, both Short Functional Text (SFT) and Functional Text (FT) have similarities in the question forms. The questions can be asked based on the explicit and implicit information which are stated in the text. Based on the questionnaire towards the twelfth-grade students, 66.67% of participants admitted finding the difficulties in such questions that contain the implicit information. Finding the implicit information is related to inference. Students find difficulties in making inference when they are doing the test. The test must be done in certain time duration. Because of the limited time, students may do the mistakes in making inference. Because of those reasons, the writer was desired to investigate whether the ways of students making inference are in accordance with the stages of making inference stated by the experts.

There are several previous studies related to inference and reading comprehension. Jumiati (2014) conducted a research about inference as a strategy. It aimed to prove whether this strategy can improve the students’ literal comprehension or not. It means that this study used pre-experimental design because there were pre-test and post-test. Wàrnidah, Suwarno and Arono (2016) also discussed the students’ difficulties in making inference in the context of students’ reading comprehension. They only focused on narrative text and found some inference classes in it. The difference of inference classes in other texts was not described in this study.

The study about incorrect inferences and
contextual word learning was conducted by Elgort (2017). It elaborated a different effect of incorrect inferences on the explicit and implicit knowledge of the vocabulary items. Explicit knowledge of meaning was less accurate after incorrect inferences than after correct inferences. In this study, he analyzed the process of how students make inference but he did not classify the inference classes.

Hidayah and Fakhirudin (2018) applied inference strategy to identify inference skills in comprehending a recount passage. They used only one of functional text, recount text. This strategy was used to improve students’ reading comprehension.

The last previous study was about inference skill in children with autism spectrum disorder. It was done by Loukusa, Makinen, Gaffin, Ebeling and Leinonen (2018). Children with ASD differ from TD children in questions demanding context utilization. This study used sensitive materials, such as Pragma-test to detect the social-pragmatic inferencing difficulties. This study was closely related to the context of communication, not in the context of textbook.

The scope of the previous studies above varies from inference as the strategy to increase students’ ability and the difficulty in making inference especially in reading comprehension. Meanwhile, in this research, the writer mainly focuses on what classes of inference which are considered as the easiest and the most difficult question for students. The writer is also desired to reveal the process of how students make inference.

There are two research problems in this study. The first question is what types of inference question which are asked in English National Exam. The second question is how students make inference. Therefore, this research is conducted to identify the classes of inference question in English National Exam and to identify the steps how students make inference.

Inference becomes the most frequently asked in reading comprehension. Here are some concepts of inference with its types or classes. Context and prior knowledge are also important in the discussion of inference in reading comprehension.

Inference

According to Gumperz (1982: 110), inference is a process of drawing conclusion and a process of interpretation. It is determined by situation and context of conversation. Thus, the hearer or reader guesses the speaker’s will and hearer will give response. Eysenck and Keane (2000: 346) also stated that process of inference is a simple illustration of the crucial role by knowledge. We can also say that it is the duty of the understanding process. We probably make some assumptions while reading the text, but our assumptions are not always true. It is because some information is provided implicitly and we will make inference naturally.

Types of Inference

The types of inference here are based on search-after-meaning principle in order to obtain more appropriate specification. Search-after-meaning principle has three critical assumptions: reader goal assumption, coherence assumption and explanation assumption. There are six types of inference stated by Gumperz (1982:130-133). They are online inference, offline inference, local inference, global inference, text-connecting inference and knowledge-based inference/extratextual (generic or specific knowledge).

Online Inference and Offline Inference

Online inference is usually called as online inference if there are following conditions. It happens if the reader is convinced that the text, if the reader is lack of background knowledge that permits the establishment of explanations and global coherence, and if the reader has goals that do not require the construction of a meaningful situation model such as proofreading the text for spelling errors. In the contrary, in offline inference, reader must have the knowledge of algebra. Reader also should understand the language which is used in algebraic problems and calculations.

Local Inference and Global Inference

In local inference, the reader should create coherence in local level. Local level is only in certain sentence or certain paragraph. Local coherence will be achieved when conceptual connections relate the content of adjacent or nearby text constituents such as a phrase, proposition, clause or short sequences of constituents. For example, a connective because, so, therefore explicitly links adjacent clauses with conceptual relation. Meanwhile, global inference covers the whole text. Global coherence will be successfully achieved when there are the following conditions: the textual features bear global coherence, the reader has the precondition background knowledge, and the reader does not have a specif-
ic goal that prevents understanding of the matter.

Text-Connecting Inference and Knowledge-Based Inference

In text-connecting inference, the current comprehended clause will be connected to the previous explicit statement in the text. Then, the previous statements is reinstated. It will be inferentially linked to the current clause. On the other hand, knowledge-based inferences established when reader activates his/her background knowledge structure in long term memory (LTM). Both specific and generic background knowledge structures are activated through the processes by explicit content words, combination of content words, and interpreted text constituents.

In this research, the writer will use the inference classes stated by Pressley and Afflerbach. It is because these inference classes are relevant to the inference questions in reading comprehension.

Process of Making Inference

Inference can be drawn consciously or subconsciously, automatically or strategically. There are some steps in making inference according to some experts. Graesser (1994) put forward the constituent stages of making inference. They said that readers build up a mental syllogism from two available premises but with a third missing. Then, the reader will disintegrate the syllogism by providing the missing premise. In providing the missing premise, the reader will search for information in long term memory and working memory, search for information in other places such as information in the text, take the content of the working memory and reactivate the two previous premises, check whether the inference that is made sufficiently explains and suits to the two premises stored in working memory.

According to Hannon and Daneman (1998: 152), process of making inference is more as a process of reasoning rather than completing inconsistencies or finding solutions. They also presented four stages involved in making inference; identify important words in the text or passage, activate important facts about words, do reasoning about those facts, computing relationships between words, and have the result that is a coherent abstract discourse representation.

In step two and step three, readers automatically activate their long term memory. Therefore, despite the differences of stages in making inference, both of them are equal in implicating the role of long term memory and working memory

Material and Methods
Type of Research

The writer used qualitative descriptive research. As stated by Bodgan and Taylor (1992: 21-22), qualitative research is the research procedures which construct descriptive data. This data are in the form of spoken or written words from people and their behaviors to be analyzed. In this study, the writer used descriptive qualitative research to analyze and describes inference meaning in the National Exam text. The writer also described the process of how students make inference to be able to answer the questions given in the text.

Technique of Collecting Data

In this research, the writer took two kinds of data; primary data and secondary data. Primary data are data which are collected by the researchers for the first time. It has specific research project at hand. On the other hand, secondary data are data which are previously gathered for some other purposes.

In this research, the writer used recording technique. The primary data were obtained by recording. The writer conducted interview towards students. The results of the interview were used as primary data for the next analysis. The results of the interview were used as primary data for the next analysis. The writer also used documentation technique to get the secondary data. The writer used original script of National Exams English text of the year 2015, 2016 and 2017. These scripts were taken from PUSPENDIK of Central Java Province. In the observation process, the writer used note taking technique. By using this technique, the writer observed the activities of the participants during the test. The writer used non participant observation because the writer was not directly involved in the activities or processes which are observed.

Population and Sample

Population in this research had some criteria, as follows; students must be in grade twelve of Senior High School, students have learned all functional text and short functional text. From those criteria, the population in this study is all twelfth grade students of all Senior High School
in Semarang. The writer used random sampling technique in choosing the samples. Number of sample in this research was thirty students. They come from several Senior High Schools in Semarang. The writer chose several students from SMA Negeri 1 Semarang, SMA Negeri 3, SMA Negeri 4 Semarang, SMA Negeri 9 Semarang, SMA Hidayatullah and SMA Al-Azhar Semarang.

Result and Discussion

Not all of short functional text appeared in English exam 2015, 2016, and 2017, but almost all of functional texts were found in these years. There were three kinds of short functional text; announcement, advertisement, letter, and ten kinds of functional text; procedure, news item, biography, report, analytical exposition, discussion, narrative, explanation, recount and review text which provided inference questions in English exam 2015, 2016 and 2017.

Types of Inference Questions in English National Examination 2015, 2016, and 2017

The following table contains the kinds of inference questions which appeared in English National Exam of the year 2015, 2016 and 2017.

<table>
<thead>
<tr>
<th>No</th>
<th>Types of Inference</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Referential</td>
<td>-</td>
<td>-</td>
<td>v</td>
</tr>
<tr>
<td>2</td>
<td>Filling in deleted information</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>3</td>
<td>Inferring meaning of word</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>4</td>
<td>Inferring connotation of words/ sentences</td>
<td>v</td>
<td>v</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Relating text to prior language</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>6</td>
<td>Inference about author</td>
<td>v</td>
<td>-</td>
<td>v</td>
</tr>
<tr>
<td>7</td>
<td>Characters or state of world depicted in the text</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>8</td>
<td>Confirming/ disconfirming previous inferences</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td>9</td>
<td>Drawing conclusion</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>Total of inference questions</td>
<td>23</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>Percentage (of 35 reading questions)</td>
<td>65.7%</td>
<td>60%</td>
<td>74.3%</td>
</tr>
</tbody>
</table>

Percentage of inference questions was obtained by dividing the total of inference question by the total questions in reading comprehension and it would be multiplied by 100%. In short, it could be written as follows;

\[
\text{Percentage of Inference Questions} = \frac{\text{Total of Inference Questions}}{\text{Total of Reading Questions}} \times 100\% 
\]

Inference questions in 2015, 2016, and 2017 had some similar and different inference classes. Referential, inferring connotation of words/sentences, and inference about author were not necessarily asked in each year. In contrary, the six types of inference (filling in deleted information, inferring meaning of word, relating text to the prior knowledge, characters or state of world depicted in the text, confirming/disconfirming previous inference, and drawing conclusion) were always used in each year and drawing conclusion dominated inference questions in 2015, 2016, and 2017.

Not all inference questions were considered as difficult questions. There were several easy inference questions and there were also several difficult inference questions. The writer added the result of students’ work to support the analyses above. In the observation process, the writer distributed fifteen questions that should be answered by students. The number of students was thirty students. They were given sixty minutes to answer all questions. The detailed number of students who could answer correctly and incorrectly was presented in Table 1.

Table 2. Type of questions that could be answered correctly or incorrectly

<table>
<thead>
<tr>
<th>No</th>
<th>Type of question</th>
<th>The number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>True</td>
</tr>
<tr>
<td>1</td>
<td>Referential</td>
<td>29</td>
</tr>
<tr>
<td>2</td>
<td>Vocabulary (filling in deleted information)</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Preposition (filling in deleted information)</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>Conjunction (filling in deleted information)</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>Synonym (inferring meaning of word)</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Inferring connotation of word</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Relating text to prior knowledge</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>Inference about author</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>Characters or state of world depicted in the text</td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>Confirming/disconfirming previous inference</td>
<td>16</td>
</tr>
<tr>
<td>11</td>
<td>Title</td>
<td>26</td>
</tr>
<tr>
<td>12</td>
<td>Purpose</td>
<td>16</td>
</tr>
<tr>
<td>13</td>
<td>Topic</td>
<td>19</td>
</tr>
<tr>
<td>14</td>
<td>Main idea</td>
<td>20</td>
</tr>
<tr>
<td>15</td>
<td>Drawing conclusion (infer, imply, conclude)</td>
<td>7</td>
</tr>
</tbody>
</table>

The easiest question Referential

The most difficult question Synonym/ closest meaning (inferring meaning of word)

Referential, preposition and conjunction became the easy questions. The easiest question about inference was referential. It proved that not all of the inference questions were difficult. More than twenty students could not answer the questions correctly, especially in vocabulary (in cloze text), synonym/ closest meaning (inferring mean-
ing of word), inferring connotation of word, and drawing general conclusion. The most difficult question was about synonym/closest meaning (inferring meaning of word).

The case above reminds us how important the vocabulary mastery. It is hoped that students ought to upgrade their vocabulary by reading a lot, and practicing their vocabulary in daily communication. If they use it in everyday life, their English skill will be better. Teachers also should help students to increase students’ vocabulary by giving many different types of literature and encouraging them to communicate in English.

Process How Students Make Inference

In this part, the writer illustrated the process of how students make inference. The number of students was thirty students. The sample was taken from several State and Private Senior High Schools in Semarang. They were divided into six groups for six meetings. It means that each group consisted of five students (S1, S2, S3, S4, and S5). In every meeting, students were given fifteen texts with fifteen questions. The questions consisted of different inference classes as discussed in previous analysis. They should be answered in sixty minutes. During the test, the writer observed students directly. Students were not allowed to bring any dictionary. Students were also prohibited to ask the meaning of some unfamiliar words to the teachers or their friends. Students were asked to do the test by themselves.

In the process of doing the test, most of students liked to underline the sentences or important words in the text or passage that might be the clues for them to answer the questions. Not only important words in the text, but also some words or phrases in the multiple choices were also marked by them.

Figure 1. The example of student’s work

In the first meeting, two students (S1 and S3) were good in understanding the questions. They understood what were asked in every text. Meanwhile, three students (S2, S4 and S5) were enough in understanding the questions. It means that they did not get the point of all questions. S1 and S3 were also able to understand the sentences in multiple choices, but there were few sentences in multiple choices which were not understood by S2, S4 and S5. This process was related to students’ vocabulary and background knowledge. It could be clearly seen when the writer tried to ask whether they understand the sentences or not. S1 and S3 could show the sentences in the passage as the right clues. S2 and S5 made only few mistakes in showing the sentences as the right clues. In contrary, S4 showed the wrong clues in many times. It indicated that choosing the right clues was very important to make inference. This process was related to the next process whether they could relate the clues with the answer or not and whether they understood the context or not. S1 still showed the consistent result that he was able to relate the clues to the answer and the context. It means that S1 succeeded in making inference. S3 was quite different from S1. In some parts, S3 could show the right clues, but he could not reveal the relation between the clues and multiple choices as well as the context. It led to mistakes in making inference. S2 and S5 did the same mistakes. When S2 and S5 got the right clues, they would take the right answer. When S2 and S5 did not understand the right clues, they would also take the wrong answer.

As happened in the first meeting, students in the second meeting also read the question without reading the whole passage. S1, S4 and S5 were able to understand what were asked. They were also able to understand each of multiple choices. On the other hand, there were some questions which could not be caught by S2 and S3. S3 only understood the half of the whole questions. Some of students in the second meeting revealed that when they sought the clues, they would read each of choices. Then, they would choose the sentences which had possibility to be the clues. S1 and S4 were good in choosing the clues. S2 and S5 were not so good in determining the clues. S2 and S5 could not show the right clues, but it only occurred in certain parts of the passage. S3 was very poor in finding the clues. He had problem with his vocabulary, therefore he could not comprehend the text. Like one of students in first meeting, one of the students in the second meeting (S5) was also not so good in
finding the clues although she was good in vocabulary. It happened because she had no wider background knowledge about some important terms in the passage. It was also related to the context in the text. Because of this problem, she could not catch the whole meaning to make inference.

The process in the third meeting was quite different from the analysis of the previous meeting. Three of students (S1, S3 and S4) did the same way that they read the question before taking a look at the passage. However, S2 and S5 tried to find the topic of the passage firstly. Both of them believed that if they knew the general topic, it would be easier for them to answer the question. Yet, they did not read the whole text since the time given was limited. In the case of understanding questions and multiple choices, S1, S2 and S5 were good. They could get the points which were asked. They also grasped the meaning of every statement in multiple choices. Meanwhile, there were some questions and multiple choices which were not understood by S4 as well as S2. S2 had the poorest vocabulary of all. She often made misunderstanding in getting the meaning of sentences in multiple choices. S2 and S5 were also good in finding the clues. Especially for S2, he was quite good in all aspects. It means that he really understood the text. He had no difficulties in vocabulary. He was also able to find the clues in the text and to relate the text with the context. In this case, S2’s performance was better than S5. S2 could comprehend the text more deeply than S5.

In the fourth meeting, four students were able to understand the questions well and one student sometimes did not understand the questions well. Most of the students admitted that they had problem with their vocabulary. It could be seen from their understanding in multiple choices. They tended to ignore the multiple choices which have difficult word. S1 and S3 showed good evaluation. S3 could understand all questions and the multiple choices, while S1 was also good in understanding all questions but she still had problem in understanding the multiple choices because of some difficult vocabularies. S1 and S3 were good in determining the right clues to answer the question. They also used context to understand the text. Both of them were able to make inference well. S2 and S5 were also good in understanding all questions, but they were not so good in finding the clues and relating them to the context. So, their ability in making inference was not better than S1 and S3. Among those five students, S4 had the lowest ability in making inference. The problem was still about the vocabulary.

The fifth meeting revealed that all students were good in understanding all questions. Still, only one of them (S4) was also good in understanding all multiple choices. He had no difficulties in vocabulary. His vocabulary helped him to understand the text more easily. He also had good background knowledge so that he could use the context to find the clues in the text. From the process, he looked excited with the questions which related to inference meaning such as making conclusion, similar meaning and finding moral lesson. The ability of S1, S2, S3 and S5 in making inference was not so good as the ability of S4. Four of them can understand all the questions but not all the multiple choices. S1 was still able to find the right clues while S2, S3 and S5 sometimes made mistake in taking the clues in the text.

The last meeting did not show significant differences with the previous meeting. All students in the sixth meeting were also good in understanding all questions, but not all of them got all information in the multiple choices. It was not only because of their vocabulary but also because of their background knowledge. S3 showed the best performance of making inference. She was rich of vocabulary. She also had wider background knowledge than others. It proved that good vocabulary and good background knowledge were really helpful for her to make inference. She could show the differences of the choices one another. For example, she could clearly state why the choice A was the best inference and why the choice B, C or D were not suitable to be the inference. Since she could show the right clues briefly, she must have been able to make inference.

It was quite different from S3, the other students (S1, S2, S4, and S5) were good in understanding the question but they did not always apprehend the statements in the multiple choices. For example, one of them can understand the statement in choice A and C, while he could not grasp the meaning of choice B, D and E. It became one of the problems in getting right answer. At least, if they knew the point of question, multiple choices and clues in the text, they would not get many problems in making inference. Students in the sixth meeting did the same process of making inference like in the previous meeting. They start by understanding question and multiple choices. Then, they find the clues in the text.
ground knowledge and finally they decide which choice as the best inference.

From all of the analyses above (the first meeting to the sixth meeting), the writer concluded that the students did the same steps of making inference. There were seven steps which were done by students. They were; understanding the question, understanding the multiple choices, finding clues in the form of words/sentences in the text, activating their prior knowledge in working memory, understanding the context of the text, relating the clues with statements in choices and what happen in working memory, and making the best inference. These stages still matched the theory stated by Hannon and Daneman (1998: 152). It was because there were processes of identifying important word (finding the clues in the text), activating important fact (activating prior knowledge), doing reasoning about the facts (relating the clues with the facts), and making a coherent abstract discourse representation (making the best inference).

Conclusion

There are some conclusions that the writer revealed based on all of the discussion above. There were similar and different inference classes National Exam English Text 2015, 2016, and 2017. Referential, inferring connotation of words/sentences, and inference about author were not always asked in each year. Meanwhile, the six types of inference (filling in deleted information, inferring meaning of word, relating text to the prior knowledge, characters or state of world depicted in the text, confirming/disconfirming previous inference, and drawing conclusion) were always used in each year and drawing conclusion always dominated in 2015, 2016, and 2017. Furthermore, this finding proved that not all types of inference questions are considered as difficult questions. The result of students’ work showed that the easiest question was about referential and the most difficult question was about synonym/closest meaning (inferring meaning of word).

In the process of making inference, students generally did seven steps. They were 1) understanding the question, 2) understanding the multiple choices, 3) finding clues in the form of words/sentences in the text, 4) activating their prior knowledge in working memory, 5) understanding the context of the text, 6) relating the clues with statements in choices and making the best inference. These steps are in accordance with the steps stated by Hannon and Daneman (1998: 152). It is because there were processes of identifying the important words. In this study, the writer used the terms ‘finding the clues’. Next process is activating the important facts. The writer stated with the terms ‘activating prior knowledge’. Further process is making reasoning about the facts. It was in line with the terms ‘relating the clues with the facts’. The last process is making a coherent abstract discourse representation. The writer called this process as ‘making the best inference’.

Basically, the process of making inference starts from understanding the text firstly, then the readers will make inference. In the last finding, the writer found that students did not use the real process of making inference because they started the process by understanding the question and the multiple choices firstly. Students admitted that they should understand the question and the choices firstly because they only had limited time during the test. Students had to finish answering fifty questions only in two hours. It became the reason why students did not do the inference process according to the actual rules.

References


