The Difficulty of Reading Comprehension and the Proficiency of the Grade 10 Students of Aloran Trade High School, Philippines

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ABSTRACT
In the 2018 Program for International Student Assessment (PISA), the Philippines ranked the lowest among the 79 countries participating in the assessment. This study aimed to determine the proficiency of the grade 10 students at Aloran Trade High School and the difficulty of reading comprehension. The instruments used in this study were adapted reading materials from PISA assessments with questions needing subjective answers, categorized according to the different comprehensions proposed in Barrett’s Taxonomy. The researchers collected data from 40 grade 10 students who were selected randomly using a random sampling technique. Item analysis (item difficulty and item discrimination) and descriptive analysis (mean and standard deviation) were used to analyze the data. After tabulating the data gathered, the researchers determined that the students have low proficiency in reading comprehension. Furthermore, no comprehension has an easy difficulty with the proficiency of grade 10 students. Literal and reorganizational comprehension have moderate difficulty, while inferential and evaluative comprehensions are difficult among the students. These imply that students need to be proficient in understanding a text’s explicit and implicit information. It is therefore recommended that interventions be made to address this issue.

INTRODUCTION
In the present times, the issue of comprehension is still prevalent. Despite being a recognized problem, comprehension is a recurring phenomenon that seems endless even in this modern age, as it is still a widely discussed topic in any academic setting. According to Duke (2010), as cited by Decena (2019), comprehension is a process in which readers make meaning by interacting with the text through the combination of prior knowledge and previous experience, information in the text, and the views of readers related to the text. The purpose of comprehension is to understand the text rather than to attain meaning from individual words or sentences, as the outcome serves as a mental representation of a text's meaning combined with the reader's previous knowledge. According to Schleicher (2019), over ten million students aged 15-years-olds represented by the Program for International Student Assessment (PISA) in 2018 were not able to complete even the most basic reading tasks, and these were students from 79 high and middle-income countries who participated in the test. Studies focused on higher education (Barletta et al., 2005; Yáñez-Botello, 2013; De-la-Peña & Luque-Rojas, 2021) show that university students have a literal or primary level of understanding; they frequently have difficulties making inferences and recognizing macrostructure of the written text, so they would not develop a model of the situation of the text. These scientific findings are consistent with previous research on reading comprehension in the mother tongue in the university population. In a survey conducted by the Functional Literacy, Education, and Mass Media Survey, as cited in Marcelo and Santillan (2020), there are 20.1 million Filipinos aged 10-64 who cannot comprehend what they read. Furthermore, according to San Juan (2019), in the 2018 Program for International Student Assessment (PISA) conducted by the Organization for Economic Cooperation and Development (OECD), the Philippines ranked the lowest in reading comprehension with a score of 340, more than 100 points less than the average score which is 487 among the 79 countries who participated in the program. Moreover, in the study conducted by Decena (2021), the findings stated that the majority of the teacher participants observed that the students have difficulty comprehending text materials and that they have inadequate comprehension and vocabulary knowledge. In this study, the researchers aimed to determine the proficiency of the grade 10 students of Aloran Trade High School in reading comprehension. Furthermore, it sought to answer the following questions:

1. What comprehension has an easy difficulty on the proficiency of the grade 10 students?
2. What comprehension has a moderate difficulty in the proficiency of grade 10 students?
3. What comprehension has a hard difficulty on the proficiency of the grade 10 students?

LITERATURE REVIEW
Comprehension
Comprehension is a process in which readers make meaning by interacting with the text through the combination of prior knowledge and previous experience, information in the text, and the views of the readers related to the text (Duke, 2010; Decena, 2019). Moreover, according to Shea and Ceprano (2017), comprehension is a highly complex

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activity that requires active thinking and assimilation of an author's message with interpretation, analysis, evaluation, and synthesis of its content, all occurring synchronously and generatively. Any gaps in comprehension are identified and addressed by a skilled reader who employs practical and in-the-moment repair tools. On one hand, the purpose of comprehension is to understand the text rather than to attain meaning from individual words or sentences, as the outcome serves as a mental representation of a text's meaning combined with the reader's previous knowledge (Decena, 2019). In addition, comprehension is not only crucial for understanding the text, but it is also essential for broader learning, success in education, and employment. It is even more important in our social lives because of email, texting, and social networking sites. Comprehension requires coordinating numerous cognitive skills and abilities (Oakhill et al., 2014).

Comprehension as a Prevalent Issue
According to Schleicher (2019), over ten million students aged 15-year-olds represented by the Program for International Student Assessment (PISA) in 2018 could not complete even the most basic reading tasks, and these were students from 79 high and middle-income countries that participated in the test. On average, only 77% of students achieved reading competency at Level 2. Students reach Level 2 when they have mastered the fundamentals of reading and are ready to apply reading to their academic work. These pupils are at least able to recognize the central concept in a somewhat long document, locate information using specific criteria, and, when specifically asked to do so, consider the function and format of texts. On the other hand, the proportion of 15-year-old students who scored at the highest levels increased marginally, from 7% in 2009 to 9% in 2018.

In these PISA reading tests, Level 5 or 6, students could comprehend lengthy texts, deal with abstract or counterintuitive concepts, and establish distinctions between fact and opinion based on implicit cues about the content or source of information.

In a survey conducted by the Functional Literacy, Education, and Mass Media Survey, as cited in Marcelo and Santillan (2020), 20.1 million Filipinos aged 10 to 64 cannot comprehend what they read. Furthermore, according to San Juan (2019), in the 2018 PISA conducted by the Organization for Economic Cooperation and Development (OECD), the Philippines ranked the lowest in reading comprehension with a score of 340, more than 100 points less than the average score which is 487 among 79 countries who participated in the program. Additionally, according to Oseña-Paez (2022), as the Philippines prepares for school opening, the World Bank reports that 9 out of 10 children in the Philippines at late primary age are not proficient in reading. Even before the pandemic, 6 out of 10 children worldwide did not achieve basic reading proficiency by age 10.

Barrett's Taxonomy
The Barrett Taxonomy of Cognitive and Affective Dimensions of Reading Comprehension is originally intended to assist classroom teachers in developing reading comprehension questions. It has four main comprehensions: literal, reorganizational, inferential, and evaluative comprehension (Clymer, 1968; Marquez, 2008; Bilbao et al., 2016). Literal comprehension focuses on ideas and information that are explicitly stated in the selection. Reading purposes and teacher questions designed to elicit responses at this level can range from simple to complex. A simple task in literal comprehension could be recognizing or recalling a single fact or incident. A more complex task might be the recognition or recall of a series of facts or the sequencing of incidents in a reading selection (or these tasks may be related to an exercise considered a reading selection). Purposes and questions at this level may have the following characteristics: recognition and recalling of details, main ideas, sequence, comparison, cause and effect relationships, and character traits (Clymer, 1968; Js, 2014). Reorganizational comprehension requires the student to analyze, synthesize, and organize ideas or information explicitly stated in the selection. To achieve the desired thought product, the reader may use the author's statements verbatim, or he/she may paraphrase or translate the author's statements. Reorganizational tasks include classifying, outlining, summarizing, organizing, and synthesizing (Clymer, 1968; Muayanah, 2014). Inferential comprehension is demonstrated by a student when he or she bases conjectures and hypotheses on the ideas and information explicitly stated in the selection, his or her intuition, and personal experience. The student's inferences may be convergent or divergent, and the student may be asked to verbalize the reasoning behind his or her inferences. Generally, reading purposes and teacher questions that require thinking and imagination beyond the printed page stimulate inferential comprehension. Personal experience is defined as formal learning experiences and those that the reader has experienced firsthand. Regardless of its source, prior knowledge is an essential component of inference. The critical distinction between inference and recognition and recall questions is that their answers must be inferred rather than stated explicitly. This includes inferring supporting details, main ideas, sequence, comparisons, cause and effect relationships, character traits; predicting outcomes; and interpreting figurative language. This requires critical thinking skills to garner understanding (Clymer, 1968; Js, 2014). Evaluative comprehension requires responses from the student indicating that he or she made an effort to evaluate ideas presented in the selection using external criteria provided by the teacher, other authorities, and written sources or internal criteria provided by the reader's experiences, knowledge, or values. In essence, evaluation is concerned with judgment and focuses on qualities such as accuracy, acceptability, desirability, value, or likelihood of occurrence (the key to this category is evaluative judgment). Evaluative thinking can be demonstrated by asking the student to make the following judgments: judgments of reality or fantasy, fact or opinion, adequacy and validity, worth, desirability and acceptability, and appropriateness (Clymer, 1968; Muayanah, 2014).
Related International Studies
According to Bharuthram (2012), university students do not access or develop effective strategies for reading comprehension, such as the capacity for abstraction and synthesis-analysis and summarizing, classifying, or organizing information in a text. Similarly, according to Livingston et al. (2015), first-year education students need more reading strategies and help to understand written texts. Moreover, according to Niereke and Ramoroka (2017), only 12.4% of students perform well in a reading comprehension task, while 34.3% present a low level of execution task. Additionally, in the study conducted by Anggraini (2017), it was also found that the students needed higher comprehension as their reading test results did not meet the cut-off score of at least 70%.

Related Local Studies
According to Dela-Peña and Luque-Rojas (2021), a significantly higher proportion of university students have an optimal level of literal comprehension compared to the rest of the reading comprehension levels. Decena's (2021) findings stated that most of the teacher participants observed that their students have difficulty comprehending text materials and that they have inadequate comprehension and vocabulary knowledge. Additionally, studies focused on higher education (Barletta et al., 2005; Yañez-Botello, 2013; Dela-Peña & Luque-Rojas, 2021) demonstrate that college students' comprehension is at a primary or literal level. These students frequently struggle to draw conclusions and understand the written text's macrostructure, which prevents them from creating a model of the text's setting. The research on mother tongue language reading comprehension among university students points in the same direction as these scientific findings. Alpitche-Bunda and Pineda's (2023) study also showed that only 39% could comprehend critically, 44% inferentially, and 56% literally. This implies that students find reading comprehension a problematic cognitive task highlighting their difficulties in recognizing vocabulary words. However, in the study conducted by Bilbao et al. (2016), it was found that the respective students performed moderately in the given test and reached the level of evaluative level of comprehension as an equivalent of the said result. Similarly, in the study by Marcelo and Santillan (2021), students performed satisfactorily at the literal level while they performed moderately at the inferential and evaluative levels.

MATERIALS AND METHODS
Research Design
This study used the descriptive method as its research design. According to Grove, Burns, and Gray (2013), descriptive designs can be used to develop a theory, identify problems with current practice, justify the current practice, make judgments, or determine what others in similar situations are doing. Moreover, Baker (2017) stated that descriptive designs collect information about variables without changing the environment or manipulating any variables. This study aimed at determining the proficiency of the grade 10 students of Aloran Trade High School in reading comprehension and its difficulty which are variables that are not manipulated.

Research Instrument
The study adapted a standardized reading material used by the Program for International Student Assessment (PISA) in assessing the reading comprehension level of the students who underwent the said program. A reading material is a tool used by institutions to determine the reading capabilities of students. The study utilized the standardized reading material to gather the data needed for the findings. The questions for this standardized reading material were categorized to the different comprehensions proposed in Barrett's Taxonomy of Reading Comprehension that required subjective answers from the participants to determine the proficiency of the grade 10 students on reading comprehension and its difficulty.

Study Participants
This study involved a randomly selected 40 grade 10 students enrolled at Aloran Trade High School during the school year 2022-2023. They were selected regardless of their age, sex, economic status, and curriculum as long as they are grade 10 students during the aforementioned academic year and school. Furthermore, it should be noted that this sample does not represent the entire population but was considered acceptable to signify the purpose of the study.

Data Collection
The data were collected through a conducted reading session where the participants underwent. It consists of three reading materials; story-based, figure-based, and scenario-based reading materials with four questions each reading material needing subjective answers from the participants. Each question was categorized to the different comprehensions proposed in Barrett's Taxonomy. The respondents were given a consent form first as well as their parents to confirm their permission to participate in our reading session. It is emphasized that their identity will remain anonymous and will be used for academic purposes only. They were given a separate sheet for their answers which were collected right after they finished answering all the questions of the reading materials. Those sheets were compiled for the analysis right after.

Data Analysis
Descriptive analysis and item analysis were employed in this study. Specifically, the study employed mean, standard deviation, item difficulty, and item discrimination in the analysis of data. First, the researchers compiled the answer sheets of the respondents. Then, it was checked individually. After checking all the answer sheets, an authorized personnel validated the accuracy of the checking of answer sheets. After the validation, the data gathered were analyzed using item analysis and item difficulty. The determination of the mean and standard
deviation took place right after the determination of the item difficulty and item discrimination.

**Mathematical Expressions and Symbols**

Mean. This refers to the arithmetic mean (average) of the findings.

\[ \bar{x} = \frac{\sum x}{N} \]

Standard Deviation. This refers to the average amount of variability in a dataset, it tells how far each score lies from the mean.

\[ s = \sqrt{\frac{\sum (X - \bar{x})^2}{n-1}} \]

Item Difficulty. This refers to the difficulty of the item based on the proportion or percentage of students who answered the item correctly.

\[ P = R/T \]

Item Discrimination. This refers to the ability of an item to differentiate among the upper and lower group of students in terms of their prior understanding.

\[ DI = \frac{(RU + RL)}{T} \]

**RESULTS AND DISCUSSION**

This chapter presents the analyses and interpretations after the statistical treatment of the data. Furthermore, implications are also indicated to testify to the results of the analyses.

Table 1 shows the results of the students’ literal comprehension difficulty and discrimination. Items 1, 5, and 9 are the items on different types of reading materials for this comprehension. It reveals that literal comprehension has moderate difficulty among the students, with a mean of 0.74 and a standard deviation of 0.28. In the context of the story-based item (item 1), it has an easy difficulty with an index of 1.00. In the figure-based item (item 5), it has moderate difficulty with an index of 0.78. In the scenario-based item (item 9), it has hard difficulty with an index of 0.45. It also reveals that literal comprehension has different difficulty levels on different types of reading materials, which means that students find it: easy to identify text-based or explicitly stated information on story-based reading material; moderately challenging on figure-based reading material; and hard on scenario-based reading material. Overall, it implies that students need help identifying text-based or explicitly stated information on a text, signifying that literal comprehension is moderately complex on the proficiency of the grade 10 students.

It also implies that literal comprehension has good discrimination among the grade 10 students regarding the upper and lower groups. According to Schleicher (2019), over ten million students aged 15-year-olds represented by the Program for International Student Assessment (PISA) in 2018 could not complete even the most basic reading tasks, and these were students from 79 high and middle-income countries that participated in the test. Moreover, Alpiteche-Bunda and Pineda’s (2023) study showed that only 56% of the student participants could comprehend literally. This implies that students find reading comprehension a problematic cognitive task highlighting their difficulties in recognizing vocabulary words.

Table 2 presents the results of the students’ reorganizational comprehension difficulty and discrimination. Items 2, 6, and 10 are the items on different types of reading materials for this comprehension. It reveals that reorganizational comprehension has moderate difficulty among the students, with a mean of 0.51 and a standard deviation of 0.33. In the context of the story-based item (item 2), it has moderate difficulty, with an index of 0.58. In the
Table 3: Inferential Comprehension

<table>
<thead>
<tr>
<th>Item Difficulty</th>
<th>Item Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-value (N=40)</td>
<td>Category</td>
</tr>
<tr>
<td>Item 3 (Story-based)</td>
<td>0.03</td>
</tr>
<tr>
<td>Item 7 (Figure-based)</td>
<td>0.15</td>
</tr>
<tr>
<td>Item 11 (Scenario-based)</td>
<td>0.08</td>
</tr>
<tr>
<td>Mean</td>
<td>0.08</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Table 3 shows the results of the students' inferential comprehension difficulty and discrimination. Items 3, 7, and 11 are the items on different types of reading materials for this comprehension. It reveals that inferential comprehension has hard difficulty with an index of 0.03. In the context of the story-based item (item 3), this comprehension has hard difficulty with an index of 0.03. The item discrimination index is also 0.03. In the figure-based item (item 7), it also has hard difficulty with an index of 0.10. The item discrimination index is also 0.10. In the scenario-based item (item 11), this comprehension also has hard difficulty with an index of 0.08. The item discrimination index is also 0.05. These imply that inferential comprehension has the same difficulties in different types of reading materials, which means that students find it moderately challenging to organize or classify information on a story-based reading material; hard on a figure-based reading material; and easy on a scenario-based reading material. Overall, it implies that students find organizing or classifying information in a text moderately challenging. It also implies that reorganizational comprehension has a fair discrimination index of 0.28. In item 6 (figure-based item), it has poor discrimination with an index of 0.10. In item 10 (scenario-based item), this comprehension has good discrimination with an index of 0.38. It also reveals that reorganizational comprehension also has different difficulty levels on different types of reading materials, which means that students find it moderately challenging to organize or classify information on a story-based reading material; hard on a figure-based reading material; and easy on a scenario-based reading material. Overall, it implies that students find organizing or classifying information in a text moderately challenging. It also implies that reorganizational comprehension has a fair discrimination among the grade 10 students regarding the upper and lower groups. According to Bharuthram (2012), university students do not access or develop effective strategies for reading comprehension, such as the capacity for abstraction and synthesis-analysis and organizing, classifying, or outlining information.

Table 4: Evaluative Comprehension

<table>
<thead>
<tr>
<th>Item Difficulty</th>
<th>Item Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-value (N=40)</td>
<td>Category</td>
</tr>
<tr>
<td>Item 4 (Story-based)</td>
<td>0.15</td>
</tr>
<tr>
<td>Item 8 (Figure-based)</td>
<td>0.00</td>
</tr>
<tr>
<td>Item 12 (Scenario-based)</td>
<td>0.25</td>
</tr>
<tr>
<td>Mean</td>
<td>0.13</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.13</td>
</tr>
</tbody>
</table>

Table 4 presents the results of the students' evaluative comprehension difficulty and discrimination. Items 4, 8, and 12 are the items on different types of reading materials for this comprehension. It reveals that evaluative comprehension has hard difficulty, with a mean of 0.13 and a standard deviation of 0.13. In the context of the story-based item (item 4), this comprehension has hard difficulty with an index of 0.15. In the figure-based item...
(item 8), it also has hard difficulty with an index of 0.00. In the scenario-based item (item 12), this comprehension has hard difficulty, with an index of 0.25. It also reveals that evaluative comprehension items discriminate fairly among the students, with a mean of 0.11 and a standard deviation of 0.9. In item 4 (story-based item), this comprehension has a fair discrimination index of 0.15. In item 8 (figure-based item), it has poor discrimination with an index of 0.00. In item 12 (scenario-based item), this comprehension has a fair discrimination index of 0.18. These imply that evaluative comprehension also has the same difficulty levels on different types of reading material, which means that students need help to critically determine or evaluate information on story-based, figure-based, and scenario-based reading materials. It also implies that evaluative comprehension has a fair discrimination among grade 10 students regarding the upper and lower groups. According to Elleman and Oslund (2019), only 10% of U.S. students achieved a Level 5, indicating that the other 90% needed help to organize several pieces of deeply embedded information and engage in reflective, evaluative, and interpretative tasks in unfamiliar topics. In addition, Alpitche-Bunda and Pineda’s (2023) study showed that 39% of the student participants could comprehend critically. This implies that students find reading comprehension a problematic cognitive task highlighting their difficulties in recognizing vocabulary words.

Table 5: Proficiency

<table>
<thead>
<tr>
<th>Proficiency</th>
<th>p-value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literal Comprehension</td>
<td>0.74</td>
<td>Moderate Proficiency</td>
</tr>
<tr>
<td>Reorganizational Comprehension</td>
<td>0.51</td>
<td>Moderate Proficiency</td>
</tr>
<tr>
<td>Inferential Comprehension</td>
<td>0.08</td>
<td>Low Proficiency</td>
</tr>
<tr>
<td>Evaluative Comprehension</td>
<td>0.13</td>
<td>Low Proficiency</td>
</tr>
<tr>
<td>Mean</td>
<td>0.37</td>
<td>Low Proficiency</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.13</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows the proficiency of students in reading comprehension. Students are moderately proficient in literal comprehension, with an index of 0.74, and reorganizational comprehension, with an index of 0.51. On one hand, the students need to be more proficient in inferential comprehension, with an index of 0.08, and evaluative comprehension, with an index of 0.13. Overall, the students have low proficiency in reading comprehension, with a mean of 0.37 and a standard deviation of 0.13. These imply that students are moderately proficient in terms of identifying text-based or explicitly stated information (literal comprehension) and organizing or classifying information from a text accordingly (reorganizational comprehension) but less proficient in terms of concluding or inferring information (inferential comprehension) and critically determining or evaluating information (evaluative comprehension) in a text. Overall, it implies that students have low proficiency in understanding a reading material’s explicit and implicit information. According to Villajuan (2020), out of 566 students who completed the test, 326 were described as frustrated, 210 were instructional, and 30 were independent readers. The Grade 8 respondents probably found the reading test difficult. They must spend time reading and need direct instructional guidance from their teachers.

CONCLUSIONS

This study determined the proficiency of grade 10 students of Aloran Trade High School in reading comprehension and the difficulty of reading comprehension. Based on the analysis, the following were derived: no comprehension has an easy difficulty with the proficiency of grade 10 students; literal and reorganizational comprehensions have moderate difficulty; inferential and evaluative comprehensions have hard difficulty; and the students have low proficiency in reading comprehension. As a recurring phenomenon that seems endless even at this modern age despite the numerous researches that aimed to address this issue, it is recommended that interventions be made regarding this phenomenon that aims at improving the students’ struggles with comprehension. Furthermore, the study acknowledges its limitation of being conducted to a small sample hence, for future researchers, a study with a large sample size and the large number of questions needing subjective answers that comprises the reading materials are also recommended to further strengthen the reliability and validity of the study.

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