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**Abstract:** *This study sought to determine the effect of higher-order thinking skills questions in improving the reading comprehension of Grade 10 students in Filipino. Using the treatment presented, the researcher analyzed the reading comprehension levels of grade 10 students in Filipino for the second semester of S.Y. 2019-2020 prior and after the use of the intervention highlighted in the study. As reflected in the findings, the use of HOTS questions in Filipino had an effect on the subjects' reading comprehension.*

**Keywords—reading comprehension, Filipino, higher order thinking skills**

## 1. INTRODUCTION

“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.” This quote from the famous physicist, Albert Einstein, suggests that the level of thinking a man has constitutes his own idea of himself and the people surrounding him. If his mental capacity is advanced, his view of the world in general is more comprehensive. So to speak, his ability to make sense of everything hinges on his capability to think on a higher level.

Thinking skill is directly proportional to reading comprehension. A student who fails to understand what he reads may have difficulties harnessing his cognitive processes. This may result to poor academic performance because much of what is done in school involves reading activities.

Researches over the decade have proven that the reading comprehension level of students went down drastically and this can be attributed to several factors. For one, the materials that are readily available for learning are not tailored to suit the cognitive level of the students. Because of this, comprehension has been limited. They cannot fully grasp the content because their linguistic competence does not match the material. Another reason for this saddening decline is the utilization of appropriate strategies for learners. For reading, most teachers only use strategies to their convenience. Some of them just provide reading materials without even considering the mental skills of the students.

Learners who are having difficulties comprehending text in the second language are slightly understandable. Their limited knowledge of vocabulary is what hinders to read materials with comprehension. They are not familiar with some of the words. However, it is alarming to know that even reading texts in the native language are still not completely understood by some learners. Some know how to read but not everyone comprehends.

To address this problem, teachers should make a conscious effort in improving the reading comprehension levels of the students specifically in the vernacular. They should think of effective ways to make reading tasks easier. This can be done not by providing simple reading texts but through the use of questions crafted to make learners think

critically. Indeed, the art of questioning lays the first stone in comprehension.

Higher order thinking skills or HOTS as defined by Watson (2019) are critical thinking skills that include synthesizing, analyzing, reasoning, comprehending, application, and evaluation. This concept is what separates low-order learning outcomes, such as those attained by rote memorization from those skills that require students to think and make intellectual judgment about the text read.

HOTS is proposed by Benjamin Bloom in his 1956 book, "Taxonomy of Educational Objectives: The Classification of Educational Goals." Higher-order thinking skills include the top three levels in Bloom's Taxonomy: analysis, synthesis, and evaluation. These skills must be developed among learners for them to successfully comprehend a reading material.

The use of HOTS in constructing questions for students may lead to better reading results as they will be compelled to think on a higher level. They should not just merely memorize pieces of information from a text. Instead, they should be able to analyze and synthesize concepts and to evaluate the implication of the reading task to their lives.

The K to 12 curriculum promotes the use of HOTS encouraging teachers to challenge students by making them think a lot. Nevertheless, some teachers resort to the traditional way of asking questions which may fall on the lower levels of Bloom's taxonomy requiring learners to just look for information from the text. Consequently, these learners are not able to make applications of they read and to carefully break down ideas for analysis.

Using HOTS questions may promote better reading comprehension. This possibility made the researcher posit that the relationship between the reading comprehension level of students in Filipino and the use of higher order thinking skills questions has to be checked so that further improvements on the methods and strategies of teachers will be observed, and the application of strategy in the instruction, if found effective will be maximized.

## 2. LITERATURE REVIEW

The central goal of education is to prepare learners in facing daily challenges and succeeding in their future

endeavours. For this to be possible, the intellect must be kindled among them. They must be able to perform tasks with ease. They should not have any difficulty with the four macro skills. Most students nowadays are able to listen, read, speak, and write. The problem is their comprehension ability.

It is almost unimaginable for a person to read without having a purpose of understanding the content under normal conditions. Truly, the motive of any reading activity is comprehension and this requires a specific process. Comprehension encapsulates some cognitive processes such as recognizing and knowing the meaning of words, focusing, detailing, remembering, deducing and interpreting, thinking, and making connections between previous experiences and new knowledge obtained (Memis, 2019). The aim of teaching reading is to develop the skills needed for the success of understanding the text. This process follows a series of stages. These reading stages are prereading, while reading and post-reading. These stages must be completed by the learners coinciding with the use of their comprehension skills. For some learners, they are not able to go through all these stages successfully because of their inability to understand what they are reading. This must be addressed through effective reading instruction rendered by the teacher.

A multitude of reading strategies must be employed to succeed with the teaching process. One of the effective ways is by helping learners use their higher order thinking skills. This is of paramount importance to make students think beyond what they are capable of. By using HOTS, the mind processes are ignited.

Higher order thinking (HOT) is from the taxonomy of cognitive domain by Benjamin Bloom which was introduced in 1956 (Forehand, 2010). Knowledge and the development of intellectual skills are encompassed in this cognitive domain (Bloom, 1956). This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve to develop intellectual abilities and skills. There are six major categories of cognitive processes, starting from the simplest to the most complex. Bloom categorized intellectual behavior into six levels of thinking: knowledge, comprehension, application, analysis, synthesis and evaluation (Clark, 2010; Yahya, Toukal, & Osman, 2012).

Bloom stated that learning occurs. The taxonomy for the cognitive domain of learning is a linear progression that involves knowledge, comprehension, application, analysis, and synthesis to evaluation. The synthesis, evaluation, and creation levels relate to knowledge, and teachers can adapt learning to motivate learners to move from the lower levels of learning to the higher levels. To encourage students to move through these cycles and reach the highest levels of learning, the use of higher order thinking questions in reading tasks is necessary. By asking students critical questions, they are able to utilize their mental faculty thus leading to better comprehension outcomes.

Research on cognitive skills indicated that students who are able to use their higher order thinking skills in the learning process help to make them more conscious of their own thinking and also promotes their learning and intellectual growth (Donald, 2002; Perkins, Jay, & Tishman, 1993). In addition, these HOTS skills are activated when students encounter situations beyond their comfort zones. The application of these skills may provide students learning opportunities that promote continued intellectual growth. Moreover, students are required to use higher order thinking and apply it to certain situations (Gillies, Nichols, Burgh, & Haynes, 2014). So to speak, these HOTS skills must be inculcated among learners to equip and prepare them in real-life situations

HOTS questions, as used in reading tasks, may be advantageous on the part of the learners as they will be given ample opportunities to think beyond what their minds are capable of. The use of low level WH-questions may just compel learners to scan the reading text to look for information without the need to understand what the text is all about and how the text can be applied. Giving them HOTS questions may urge them to read the whole text paving the way for improved comprehension.

### 3. RESEARCH QUESTIONS

This study aimed to determine the effect of higher-order thinking skills questions in improving the reading comprehension of Grade 10 students in Filipino.

Specifically, it sought to answer the following questions:

1. How may the reading comprehension level of the respondents in Filipino be described before the use of higher-order thinking skills questions?
2. How may the reading comprehension level of the respondents in Filipino be described after the use of higher-order thinking skills questions?
3. Is there a significant difference between reading comprehension level of the respondents before and after the use of higher-order thinking skills questions?

### 4. RESEARCH METHODOLOGY

Two group experimental design were used in the study.

The researcher used a control group who was not given higher-order thinking skills questions as the intervention and an experimental group who was subjected to the treatment.

The study sought to determine the effect of using higher-order thinking skills questions in improving reading comprehension. The subjects were exposed to the treatment over a period of time.

Using the treatment presented, the researcher analyzed the reading comprehension levels of grade 10 students in Filipino for the second semester of S.Y. 2019-2020 prior and after the use of the intervention highlighted in the study.

Sampling

The population of this study consisted of a group of grade 10 students for the second semester of the school year 2019-2020 at Meycauayan National High School – Annex.

Two sections of grade 10 were used as the subjects of the study. One section served as the control group and the other was the experimental group.

Subjects were chosen through random sampling

Data Collection

Two sections from grade 10 were taken as the subjects of the study. Both the control group and the experimental group were given a pretest.

A researcher-made reading comprehension test in Filipino was given before the treatment. The control group used simple knowledge level questions integrated in the discussion while the experimental group were given exercises involving higher-order thinking skills questions.

After the intervention, a post test almost similar to the pretest was administered to both groups to determine the effect of the treatment in the experimental group and to see significant differences between the reading comprehension levels of the two groups.

Ethical Issues

Fundamental ethical principles were strictly adhered to in the conduct of the study. The welfare of all subjects were considered to protect them certain instances the research activities may bring about, which may make them uncomfortable. The confidentiality of the data gathered from the subjects was ensured to prevent physical and emotional effects that the research in general may cause them.

Furthermore, the procedures that the researcher undertook were permitted by the school management.

Data Analysis

Data Analysis

The results obtained from the pretest and post test of grade 10 students were checked, collected and interpreted.

Mean and standard deviation were used in the pretest and posttest scores. Table 1 shows the mean of the pretest and posttest scores of the experimental group.

	Participants	Test Items	Total Scores	SD	Mean
PRETEST	40	50	1541	3.01	38.51
POST TEST	40	50	1720	2.86	42.95

As evident in the table, the mean scores improved from 38.51 in the pretest to 42.95 in the posttest. Needless to say, the use of higher order thinking skills questions had an effect on their reading comprehension.

Meanwhile, the performance of the control group was almost the same in the pretest and post test.

Furthermore, paired sample t-test was used to test the significant differences between the scores of the experimental group in the pretest and post test

N	Calculated/ T-value	Critical value	Decision	Remarks
40	3.07	2.02	Accept Ha	Significant

Table 2 shows the calculated t-value of 3.07 is greater than the critical value of 2.02.

This only means that there is a significant difference between the mean of the pretest and post test scores of the experimental group. Hence, the use of HOTS questions was deemed effective in reading comprehension of the respondents.

5. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are humbly and respectfully offered:

1. Teachers may regularly observe the use of HOTS questions during classroom discussion and reading activities as it was deemed effective in the study.
2. Reading materials with HOTS guide questions may be promoted and utilized.
3. School administrators may conduct programs and trainings for teachers to be equipped in employing the art of HOTS questioning.
4. Future researchers may conduct studies related to reading comprehension and higher order thinking skills.

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