



CONTEXTUALIZED HYPERMEDIA P.R.I.D.E.: TOOL TO ENHANCE READING COMPREHENSION PROFICIENCY OF SENIOR HIGH SCHOOL LEARNERS

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**CONTEXTUALIZED HYPERMEDIA P.R.I.D.E.: TOOL TO ENHANCE READING
COMPREHENSION PROFICIENCY OF SENIOR HIGH SCHOOL LEARNERS**

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ABSTRACT

The purpose of this study was to investigate the use of Hypermedia P.R.I.D.E. as a tool to enhance the reading comprehension proficiency of senior high school learners and to find out whether there is a significant relationship between the use of the designed website application and reading comprehension. The study involved eighty-one Grade 11 students who were officially enrolled at Koronadal National Comprehensive High School in Koronadal City, academic year 2021 – 2022. The study employed a quasi experimental design under the one-group pretest-posttest measures. The group did not use the website application at the outset and upon administering the pretest. The same learners utilized and accessed the application during the posttest phase. The findings of the study indicated that there is a difference in the pretest and posttest scores of the learners. There is a significant difference in the mean gain scores of the pretest and posttest. Moreover, there is a strong relationship between hypermedia P.R.I.D.E. and reading comprehension in terms of enhancing students' reading comprehension proficiency. Based on the research conducted, it was proven that the use of hypermedia P.R.I.D.E. is an effective strategy to enhance the reading comprehension proficiency of Grade 11 learners.

KEYWORDS: *Pretest-Posttest, Grade 11, Hypermedia P.R.I.D.E. Reading Comprehension Proficiency, One-group Participants*



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Context and Rationale

When reading comprehension is seriously considered in the current educational context, reading problems of learners are always thought of. The scope of these reading difficulties includes the learners who have trouble decoding letters in a text and translating them into spoken language, visual learners' difficulty to comprehend text due to its pure text-based approach, and those learners who appear to be reading admirably but struggle with understanding, connecting, and interpreting what they are reading.

In the United States, a study that involved students revealed that 24% of eighth graders and 33% of fourth graders tested below basic in reading skills (The National Assessment of Educational Progress, 2012).

In the Philippine context, the study conducted by the Southeast Asian Ministers of Education Organization and the United Nations Children's Fund (UNICEF, 2020) showed that majority of Grade 5 pupils had reading proficiency levels comparable to those in the first years of primary school, with 27% of students still at the level where they can only match single words to a picture of a common object or concept. Moreover, only 29% of Grade 5 pupils in the country are capable of reading a variety of texts and beginning to connect with their meanings (Balinbin, 2020). Paralleled to these results, the findings of the Program for International Student Assessment (2018) exposed that over 80 percent of Filipino students around the age of fifteen did not reach the minimum level of proficiency in reading (Manlapig, 2020).

In Koronadal National Comprehensive High School – Senior High School, a study involving the Grade 11 Accountancy, Business, and Management students disclosed that students had low reading comprehension level based on the given test before an intervention was employed by the teacher to improve the result (Rivera, 2019). Moreover, the reading profile of Baongco National High School in 2017 uncovered some beginning, frustrated, and instructional readers who were in Grades 7 and 8, and even those who were already in a higher-grade level. The Reading Program catered to 55 clienteles, 7 of whom were beginning readers while 12 were in the frustration stage. The remaining 36 students were considered instructional readers. An identified salient factor in the low academic performance of these students is the poor or weak vocabulary building and reading comprehension.

These findings suggest an existing problem on the reading comprehension level that needs intervention to increase students' proficiency that can assist in their performance in the common areas of learning, particularly in improving students' reading comprehension skills. The investigations also indicate that there might be a need to employ computer – assisted intervention that can help students' comprehension since technology growth has greatly affected the way people value reading as a macro skill.

Literature Review

Reading comprehension was defined by Van den Broek & Espin (2012) as a complex interaction among automatic and strategic cognitive processes that facilitates the readers to visualize the text in their minds.



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Comprehension is founded on language processes such as basic reading skills, decoding, vocabulary, sensitivity to text form, inferencing, and motivation, as well as the characteristics of a reader such as prior knowledge and working memory. Furthermore, it also requires effective use of strategic processes, such as metacognition and comprehension monitoring (Yovanoff et al, 2005).

On the other hand, reading is a complex process that involves sensation, perception, comprehension, application and integration. With these attributes of reading and the rapid development of technology, the reading platform has shifted from conventional learning environment which employs traditional text into computer – assisted learning environment. In fact, the emergence of digital documents becomes a rich source of various interventions that can be used to improve reading comprehension and academic performance of the learners. Sencibaugh (2007) argued that meta-analyses of research indicate that interventions for improving reading comprehension are only successful when they are precise, consistent, and intensive.

On the subject of reading comprehension, hypermedia environments may help L2 readers understand what they are reading since they provide additional information at both the word and the topical level (Lomicka, 1998; Martinez-Lage, 1997). Bornman (1993) viewed hypermedia as an extension of hypertext and multimedia. It is founded on the idea of hypertext that uses nodes and links that contain sound, animation, text, graphics and video for the presentation of information by making use of computers. In other words, electronic reading provides L2 readers with an access to extratextual and textual information to learn more than what is in the text contrary to the traditional reading.

Further, Aydemir, Öztürk, and Horzum (2013) shared that students' higher comprehension was exhibited when reading informational text on a screen than students reading from printed materials. In addition, students prefer reading and understanding digital text than print text, for several reasons. (Mangen, Walgermo, & Brønnick, 2013). In the same vein, (Kivunja (2014) suggested that there is a need for schools to move forward in education incorporating the technology needed to support what has come to be known as a 21st century education. A report from McKinsey Global Institute (2012) emphasized that other changes have taken place over the past few decades as technology and globalization help reshape educational perspectives and concerns. These changes require students to be highly skilled at comprehending text and masterful communicators as they work with others.

Similarly, a focus on identifying what students already know and what they need to know and tailoring instruction based on this information to meet students' needs may make instruction more efficient, allowing students to learn content more quickly or more deeply. College students learnt statistics online around 50% much faster than students in traditional large lecture courses.

However, a study of Mangen, Walgermo, and Brønnick (2013) showed that students' reading comprehension deteriorated as they read linear expository materials on a computer screen as compared to their peers who read the same text on paper.

Additionally, it appears that the format of the digital text, whether long pages that require students to scroll to display the text or single pages that appear and fill the screen after a click on a link, has no bearing on comprehension, as students have demonstrated that they can comprehend digital explanatory text in either format (Şahin, 2011).



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Nevertheless, studies of AbuSeileek (2011) and Chang and Hsu (2011) have identified the need for computer assisted language learning (CALL) reading materials to boost reading comprehension. Moreover, numerous reading researchers recommended the need for graded readers and scheduled activities like those provided in hypermedia texts to heighten the reading comprehension (Pulido & Hambrick, 2008 and Liburd & Rodrigo, 2012).

Innovation, Intervention, and Strategy

The present study will put a serious consideration on taking advantage of the computer – assisted instructions and interventions in improving the reading comprehension proficiency of the learners, specifically among the senior high school students. Due to the growing use of digital resources and materials, teachers must be able to identify reading comprehension strategies that will help students better understand the multimodal digital informational text that is popular in and out of the classroom today.

The hypermedia is an extension of multimedia technology that can be utilized and integrated in language teaching and learning processes in schools. The effect of using this technological innovation can be of great help for teachers and learners to promote technological usage and awareness to cope with 21st century skills learning through the utilization of online multimedia platform.

Moreover, the study will give a better understanding on the use of hypermedia in instructional setting brings an increased learners' interest in reading and boosts their reading comprehension. Through utilization and dissemination of results and proposed intervention, school administrators and teachers will be more guided about employing practical and effective strategies to address the students' learning needs.

Finally, this present study gives its significance by developing an electronic self – learning package that aims to have a positive impact on the students' reading comprehension proficiency and will give a better means of addressing the current mechanism of providing instructional approaches due to limited and no face – to – face interaction between a teacher and the learners.

Action Research Questions

This study aimed to determine the effectiveness of hypermedia PRIDE (Producing Realistic Innovative Digital Education) to enhance the reading comprehension proficiency of Grade 11 – HUMSS students of Koronadal National Comprehensive High School.

The following questions were specifically addressed by this present study:

1. What is the reading comprehension proficiency of the learners in the pretest?
2. What is the reading comprehension proficiency of the learners in the posttest?
3. Is there a significant difference in the pretest and posttest scores of the learners using the hypermedia PRIDE on reading comprehension?



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Action Research Methods

A. Participants of the study

The study involved two Grade 11 HUMSS classes in Koronadal National Comprehensive High School which were grouped together. These are the students who are currently taking up Reading and Writing Skills as a core subject and which can utilize hypermedia as a technique in the reading activities of students. Furthermore, the topic on hypertext and hypermedia is included in the Most Essential Learning Competencies (MELCS) of the senior high school curriculum. In this study, all the learners experienced the use of hypermedia texts as part of the posttest which was administered.

B. Data Gathering Method

A teacher – made test, which had undergone validation by the Master Teachers who are teaching English and the Division English Supervisor, was employed in this study to identify the pretest result of the learners. Before the administration of the posttest through the electronic self – learning package with hypermedia, the reading comprehension proficiency of the learners was determined in the pretest and posttest. The interpretation of the learners' comprehension level employed the DepEd Phil-IRI (Philippine Informal Reading Inventory) Oral Test Criteria.

Subsequently, an electronic self – learning package was developed and had gone through quality assessment concerning its content, usability, and technicalities. Moreover, the electronic self – learning package which is embedded in hypermedia underwent evaluation by the experts to determine its reliability and validity before it was given to the participants for utilization to identify its effect on their reading comprehension proficiency. After using the website application, students also evaluated the electronic self – learning package based on its engagement, developmental appropriateness, instructional design, motivation, and accessibility. The arithmetic mean was used to determine the difference between the pretest and posttest results of the learners. The description of the level of reading comprehension of students was based on the DepEd Phil-IRI (Philippine Informal Reading Inventory) Oral Test Criteria which classifies the learners in the frustration, instructional, and independent levels.

Phil-IRI Oral Test Criteria

Level	Word Recognition (WR)	Comprehension
Independent	97 – 100%	80% – 100%
Instructional	90 – 96%	59% - 79%
Frustration	89% below	58% below

Website Application Evaluation Guidelines

Engagement	Is it user-friendly? Does the web application open new ways for you to learn?
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Developmental Appropriateness	Is the app's content appropriate for the intended age group? Does the design appeal to the intended level?
Instructional Design	Does it meet students' learning expectations? Does it include interactive features that allow for feedback, assessment, and reflection?
Motivation	Is the app's content inviting and relevant to the intended grade level? Does it include gaming principles and motivating methods? Does it help students connect learning with their real world experiences (e.g. Via GPS, Bluetooth, WIFI)?
Accessibility	Is the website application easy to open and use?

*Adapted from: Guidelines by Apple's Apps in the Classroom Guide:
https://www.apple.com/educational/docs/L523172A_EDU_App_Guide_062013.pdf*

Discussion of Results and Reflection

The results on the effect of hypermedia P.R.I.D.E. on the reading proficiency of Grade 11 HUMSS students are presented and discussed in this section.

Table 1. Reading Comprehension Proficiency of Grade 11 HUMSS Students in the Pretest

	Rating	Level
Weighted Pretest Average Comprehension Percentage	19.52% 48.80%	Frustration

The table 1 shows that Grade 11 HUMSS students were in the Frustration level in terms of their reading comprehension competency after the pretest was administered. In this level, the learners score 58% and below in comprehension. The interpretation was based on the predetermined Phil-IRI Oral Test criteria. This clearly manifested that the learners are already equipped with the essential reading skills appropriate for their intended grade level.

Table 2. Reading Comprehension Proficiency of Grade 11 HUMSS Students in the Posttest



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	Rating	Level
Weighted Pretest Average Comprehension Percentage	24.04% 60.10%	Instructional

Table 2, which exhibits the reading comprehension level of the learners in the posttest, highlights a significant increase in the weighted pretest average and comprehension percentage compared to the pretest result. The students registered a 4.52% increase in their pretest average and 11.30% gain in the comprehension percentage, respectively. Considering the increase in both the pretest average and comprehension percentage in the posttest, it evidently marks a positive effect on the reading comprehension proficiency of the learners.

Table 3. Significant Difference in the Pretest and Posttest Scores of the Learners

Indicator	Mean	t-computed	p-value	Remark
Pretest	19.52	67.5411	<.00001	Significant
Posttest	24.04			

**The difference is significant at $p < .05$ level (one-tailed).*

As clearly shown in table 3, the one-group participants have acquired 67.5411 as a computed T-value, which is set in 0.05 as the level of significance. The calculated t-value of 67.5411 is greater, therefore, it indicates that there is a significant difference in the mean gain scores of the pretest and posttest of Grade 11 HUMSS students. Moreover, the difference in the results of the pretest mean which are 19.52 and the posttest mean at 24.04 also reveals a higher comprehension proficiency. Therefore, both the results of the t-value and the difference of the pretest and posttest means and comprehension level clearly signify the effectiveness of the use of hypermedia P.R.I.D.E. as a tool in enhancing the reading comprehension proficiency of the students.

Reflections

The poor reading comprehension of the learners is expected given the fact that many factors affect the skills that are needed to enhance the comprehension. However, with the advent and utilization of various resources and materials, which can be digital or printed, this perennial problem in the educational arena has been reduced and has helped the teachers to be creative and innovative in their instruction. Considered as the digital natives, our learners have a fuller understanding of the magical usage of technology in their learning. Thus, teachers have to empower themselves digitally to cater this learning need. Although the traditional instruction has still the influence in our learners' learning, yet, it can't be denied that the proficiency is magnified with the use of computer – assisted instruction.





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Interactive computer applications are capable of illuminating an idea through appealing animation, sound, and demonstration. They give students the freedom to work alone or in groups to solve problems while moving forward at their own speed. Students can immediately see whether their response is correct owing to computers' immediate feedback. In this study, the reading comprehension level of the senior high school learners has been strengthened when utilizing the contextualized hypermedia tool. The learners increase their reading pace and fluency in oral comprehension both improved when using CAI. (Gibson, Cartledge, & Keyes, 2011). The use of CAIs with children who are both considerably inattentive and poor early readers may be a useful strategy to keep them from falling far behind academically in contrast to their classmates (Walcott, Marett, & Hessel, 2014).

Action Plan

**Action Plan on the Hypermedia P.R.I.D.E.: Tool to Enhance
Reading Comprehension Proficiency of Senior High School
Learners**

Goal: To conduct research to determine the hypermedia effect on the reading comprehension proficiency of students and utilize the crafted electronic self – learning package for students.

Stages	Persons Involved	Time Frame	Resources Needed	Success Indicators
Seek approval from the Division Office <input type="checkbox"/> Proposed Work and Action Plans	Researchers	April 2020		Approved Work and Action Plans



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Seek approval of the Proposed Budget from the DepEd Regional Office through BERF	Researchers	April 2020		BERF funded study –
Implement the flow of the Approved Work and Action Plans	Researchers	April – July 2020		Implemented Work and Action Plans Validated tool/instrument Crafted and evaluated electronic self – learning package Hardbound copy of the study
<ul style="list-style-type: none"> • Test validation • Administration of Pretest • Analysis and Interpretation of Data • Development of Electronic Self – Learning Package • Evaluation of E – Self – Learning Package • Administration of Posttest • Analysis and Interpretation of Data • Dissemination and Utilization of Research Results 				



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