Volume 16 • June 2021
Print ISSN 2244-1824 · Online ISSN 2244-1816
DOI: https://doi.org/10.7719/irj.v16i1.614

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by AJA Registrars, Inc.

Exploring the Level of Grade 7 Students' Reading Proficiency in Comparison to the Norm

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Originality: 100% • Grammarly Score: 99% • Plagiarism: 0%

ABSTRACT

Reading comprehension requires specific skills, and improving it entails the collective efforts of the school, teachers, and students. Schools use various assessments to measure students' reading skills to ensure that students are at par with their grade level. This study ascertains the reading proficiency level of 232 Grade 7 students in an international school in Cambodia. The researchers used

a quantitative method, and data from the Measure of Academic Progress Test were gathered through the Rasch Unit Scale. The participants are the whole population of grade 7. Furthermore, data were analyzed through arithmetic mean and standard deviation to assess students' proficiency level and identify the goal that should be prioritized for improvement. The results reflected that the majority of the students did not achieve the norm grade level mean Rasch Unit. Moreover, from the five goals, Literary Text: Language, Craft, and Structure should be improved the most.

The findings of this study suggest improving all five reading goals with Literary Text: Language, Craft, and Structure as the main priority. Consequently, the results provided significant implications to the school in developing enrichment programs tailored to address the reading goals, teachers in terms of teaching strategies and differentiation, and students preparing for their Advanced Placement course.

Keywords **—** Education, Reading Comprehension Level, Reading goals, Assessment, Measure of Academic Progress (MAP) test, descriptive research design, Cambodia

INTRODUCTION

Reading plays an essential role in students' success. Reading for various purposes is a precursor of students' efficacy in schools, colleges, and universities. Reading is fundamental to teaching and learning. It is important to consider the conditions in which the developing child is necessary to extract and utilize meaning obtained from the text (Clarke, Truelove, Hulme, & Snowling, 2013). It is a necessary 21st-century skill for students and professionals. Grainger (2010) pointed out that reading is an essential variable for success in the long term, while Meniado (2016) believed it to be one of the linguistic skills that students should develop for academic success and quality of life. Therefore, the development of reading abilities has great importance.

On the other hand, reading comprehension is defined as the ability to understand the passage being read and construe what the author is trying to convey while practicing how to deduce with the use of schema. Moreover, it requires a specific set of skills such as word reading ability, vocabulary knowledge, syntactic skills, memory, and discourse-level skills (Oakhill, Cain, & Elbro, 2014). Thus, the enhancement of the mentioned skills is crucial and the key to mastery. According to Duke and Pearson (2009), for good readers, text processing does

not only occur for the duration of reading as heavily misconceived by some; but even in short breaks held during reading, after the reading itself has started, and after the reading has ended.

Relatedly, schools across the world conduct assessments to improve student's learning outcomes. Assessment in education is required to, for the most part, provide the aim of supporting learning. Hence, it is suitable to begin a study of assessment to explore the significance and practices of assessment that fulfill this goal most precisely (Gardner, 2012). Different assessments are provided to evaluate learners' academic progress to track student progress and readiness and assess student needs (Organisation for Economic Co-operation and Development, 2013). Moreover, educators assess reading to identify the strengths and needs of students and tailor it with appropriate teaching instructions.

In middle- and high-class income countries, reading skills have significantly not improved over the past years. Additionally, the academic achievement of U.S. students decreases compared to other countries (DeSilver, 2017). Internationally, the U.S. ranks in the middle in terms of science, maths, and reading scores. According to Brandon (2021), a significant number of students in the U.S. have not fully developed their reading skills. The number of children from grade 4 to grade 8 reading at or above their grade level decreased between 2017 and 2019.

The Organization for Economic Cooperation and Development conducted a study about Program International Students Assessment (PISA) aiming to assess reading literacy virtually while retaining the ability to measure trends in reading literacy. In 2018 the results highlighted a decline in literacy skills since the last survey that was conducted in 2015 (Organisation for Economic Co-operation and Development, 2019). The OECD conducts this global assessment of education systems every three years, measuring the ability of 15-year-olds to use their reading, mathematics, and science knowledge and skills in meeting real-life challenges. As a result, in Beijing, Shanghai, Jiangsu, and Zhejiang (China), Estonia, Macao (China), and Singapore, students in grades seven and above reached a minimum level of proficiency in reading close to 90%. On the other hand, Cambodia, Senegal, and Zambia averaged 10% in 2017. The projected numbers show that all countries still have a long way to achieve the global goals for quality education as prescribed by the UN SDG by 2030.

Meanwhile, Spink and Cheng (2020) evaluated the 2019 Southeast Asia Primary Learning Metrics (SEA-PLM) results. SEA- PLM is a new regional large-scale student learning assessment program designed by and for countries in Southeast Asia, having Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, and Vietnam as the first participants. The assessment focuses on Grade 5 children and

three learning domains: reading, writing, and maths. Findings projected alarming inequities in learning outcomes for children. Some students are excelling, but a significant number of students lack foundational skills and are likely disadvantaged and unlikely to catch up. Specifically, in the reading assessment, Cambodia had 11%, Lao PDR (2%), Myanmar (11%), and the Philippines (10%). Conversely, it should be noted that the minimum proficiency level in reading suggested by the Sustainable Development Goals (SDG) is 4.1.1b, and small to modest percentages of Grade 5 children reached the target (Valenzuela, 2021).

With these said, numerous studies on the identification of underlying causes emerged. Students' level of reading skills depends on multiple factors. So, Pourhosein Gilakjani and Sabouri (2016) conducted a study on improving their reading comprehension skills. It projected that there is a great significance of motivational factors that impact students' reading comprehension. He concluded that reading materials and activities should be understood fully and appropriate to the student's proficiency level. A similar study was conducted by Wutthisingchai and Stopps (2018) to determine internal and external factors affecting government and private school students' reading ability in Indonesia. Findings revealed that all students rated the text selection as the most critical factor; attitude as highly important and environment, motivation, learning preferences, and teaching technique as moderately important. Therefore, mentioned factors should also be considered in the assessment.

In this study, the researchers utilized the Measure of Academic Progress (MAP) test, an online assessment tool that several schools worldwide use to assess students' reading, language usage, science, and mathematics skills and measure their current performance. It is adaptive because questions become difficult when students' answers are correct, and they become easy when answers are incorrect. Additionally, MAP is devised to evaluate students' achievement and growth over time. Therefore, this study contributes to the school and teachers as the results significantly impact the students' Advanced Placement (A.P.) courses, giving students the chance to tackle college-level work while still in high school, whether they are learning online or in the classroom. By providing the results, teachers will fully understand the results and develop an action plan for students who are lagging.

Meanwhile, numerous studies related to factors, affect reading comprehension and the reliability and validity of the MAP test as a standardized test. However, only very few studies analyze the reading comprehension level of middle school students in international schools and identify the specific reading skill that needs emphasis for academic improvement.

FRAMEWORK

There are a few major theories regarding reading comprehension; however, two best fit the study: Constructivism and Transactionalism. Constructivism heavily relies on background experience to comprehend a text. This means that the more background experience the learners have, the greater their chances of constructing meaning, eventually understanding the whole text. Thus, the process is a more active approach as the learners are responsible for their learning. On the other hand, the Transactional theory involves the reader and the text. Therefore, learners are encouraged to develop reading strategies to deepen their understanding of reading material, such as making connections between one idea and another, visualizing meaning, summarizing, and questioning. In connection, teachers play a role in this theory. In conclusion, the reading proficiency level of students is profoundly influenced by proactive approaches such as the use of schema and reading strategies facilitated by teachers in approaching a text to comprehend it.

OBJECTIVES OF THE STUDY

The study explored the reading comprehension level of the whole population of grade 7 students in an international school in Phnom Penh, Cambodia, using the MAP test results in October 2020. It also seeks to identify what specific reading goal needs to be addressed by the school. Specifically, the study seeks to (1) determine if the proficiency level of the students in terms of the five reading goals are appropriate for their grade level and (2) identify the specific reading goal that should be urgently addressed.

METHODOLOGY

Research Design

The researchers used a descriptive research design. The Rasch Unit Scale was utilized to gather the Measure of Academic Progress (MAP) test results of all the grade 7 students at CIA First International School, Phnom Penh, Cambodia. A quantitative method was utilized. With all the limitations and difficulties brought about by the pandemic, the researchers have decided to use probability sampling to select the participants of this study. Though it does not represent the entirety of the middle school population, the whole population of grade 7

students participated in the study. Furthermore, the researchers analyzed the data through arithmetic mean and standard deviation.

Before the actual research, there were some procedures the researchers had to follow. First, a verbal request transpired between one of the researchers to the Deputy Principal of Middle School, and the MAP Coordinator. Second, the researchers sent an email to her officially asking to conduct a research study of the grade 7 students using the Fall 2020-2021 grade report in reading. She then forwarded an email to the Middle School Principal for the approval of the research. Finally, the researchers received a confirmation with all the details needed after two days.

Research Site

CIA First International School is located in Phnom Penh, Cambodia. It is one of the four international schools accredited by the Western Association of School and Colleges (WASC). The institution has three campuses: two offering Kindergarten to Middle School Education and one offering High School Education. Additionally, students of different nationalities, including Khmer, American, Indian, Vietnamese, Irish, Filipino, and Chinese, attend the schools.

Apart from its good reputation and diverse learners, the school has a different standard and curriculum than the local schools. These are some of the many deciding factors of the researchers on choosing the school.

The schools administer the test biannually, every October and February, or every fall and spring. Moreover, the results were available in October 2020; however, the data were taken and analyzed in July 2021 at the main campus that offers Kindergarten to Middle School Education.

Research Respondents

The participants of the study are the whole population of seventh graders. Grade seven has 232 students that consist of 10 classes: 24 students from Artemis, 21 students from Achilles, 23 students from Andromeda, 24 students from Aura, 24 students from Athena, 23 students from Antigone, 23 students from Ares, 24 students from Atlas, 23 students from Apollo and 23 students from Ariadne classes.

At CIA First International School, students were provided copies of stories covered in each unit. Unfortunately, observations reveal a very significant number of students who do not take their time to read the provided material and will only start with a couple of pages. Despite having library sessions twice a month,

students still have low progress in reading, and their interests in the activities also are noticeably declining. There were some reports about many students skipping the sessions and not reading the whole set of questions. This low engagement to reading can be traced to students' minimal exposure to reading activities and factors such as intrinsic motivation and interest to read.

Instrumentation

The research instrument is the Measure of Academic Progress (MAP) test. It is an innovative method as it moves away from the traditional way of assessing. To further elaborate, the MAP test is a digital testing tool administered two times a year to measure grade-level proficiency. Additionally, it is an "adaptive assessment program" (Charlotte-Mecklenburg Schools, n.d.) that adjusts its difficulty level, providing each student with a unique test appropriate for their proficiency level (Arrowed International School, n.d.).

The researchers extracted the reading results from the Growth: Reading 6+ CCSS 210 V3/ Common Core State Standards English Language Arts/ Literacy: 2010. It is the specific test for reading administered in October 2020. The five-goal areas in reading proficiency are (1) Literary Text: Key Ideas and Details, (2) Literary Text: Language, Craft, and Structure, (3) Informational Text: Language, Craft, and Structure, (4) Vocabulary: Acquisition and Use, and (5) Informational Text: Key Ideas and Details.

Validation of Instrument

Known for its reliability, vertical scaling, and data accuracy, the MAP test is the only assessment tool that evaluates the students' learning progress by determining whether they are on track for future assessments, such as the end of unit exams or standardized tests. The Rasch Unit (RIT) Scale is used in MAP Growth for measuring and comparing academic progress. It will help the researchers assess the proficiency level of the seventh graders as it measures the levels of academic difficulty. It goes evenly throughout the grades, evaluating the students' overall score in their core subjects. The user norms in this particular MAP test are based on the batch of students who have taken the test for that particular subject and course. Therefore, these results are not comparable to results based on nationally representative norms. David et al. (n.d.) described MAP Growth as a "stable, equal-interval vertical scale and the accurate, valid, and reliable." They added that it is the only provisional assessment that provides school-level standards based on the most current data gathered.

Data Analysis

The Rasch Unit (RIT) Scale data was carefully analyzed by determining the mean and the standard deviation of the five goal areas of reading proficiency. To elaborate further, the researchers chose arithmetic because it is simple and highly effective in identifying the representative level of the students and the particular skill they need to improve. Although standard deviation does not directly answer the research questions, it provides additional evidence and explains the gap between the performing and underperforming students. Simultaneously, it also shows how diverse/heterogeneous the students' performance is while showing that there are still students who are doing well.

RESULTS AND DISCUSSION

Of the two hundred thirty-two grade seven students, only one hundred eighty-nine students with valid test scores were included to gauge their reading proficiency. The MAP growth score has shown that the mean RIT of the students is 208.8 (≈209). The obtained mean RIT falls short compared to the norm grade level mean RIT, which is 214.2. It also did not reach the target growth for Grade 7 students. Moreover, the calculated standard deviation is 13.7 showing how diversely spread the scores of the students were and that most of the scores converge on the lower average scores. It is to be noted that out of the 189 students, only 66 students are at or above the norm grade level, which means RIT.

It implies that most students in the school are underperforming from the typical reading proficiency level of the same grade and compared to students across the nation. On the other hand, their below-average performance scores strongly suggest that most students are either behind the lesson or having difficulties with the lesson. A review of the relationship of schema and reading comprehension by Smith, Snow, Serry, and Hammond (2021) revealed that higher levels of schema have various impacts, especially when factors such as the nature of the text, the required quality of the situation model, and the presence of reader misconceptions about the text come into play. Thus, there is a probability that most of the students in this study lack background knowledge about the given texts.

Overall, the results suggest that all the five-goal areas should be improved or addressed with emphasis on Literary Text: Language, Craft, and Structure due to its lowest proficiency level obtained by the students. Relatedly, Nel, Dreyer, and Klopper (2004) conducted a study with similar results. They concluded that

the first-year South African college students have overall difficulties in certain reading areas, including vocabulary, fluency, reading comprehension, and reading strategy use. However, Al-Jamal, Al-Hawamleh, and Al-Jamal (2013) received different results in their study. It revealed that the 10th graders in Jordan have a moderate reading comprehension proficiency level.

The table below shows the overall and the specific breakdown of the students' performance in the five-goal area under reading proficiency.

Table 1. Summary of Reading Proficiency of Grade 7 Students

	Lo %ile < 21	LoAvg %ile 21 -40	Avg %ile 41-60	HiAvg %ile 61 – 80	Hi %ile >80	Mean RIT (+/- Smp Err)	Std Dev
Overall Performance	26%	28%	24%	15%	6%	208-209-210	13.7
Goal Area							
Literary Text: Key Ideas and Details	27%	27%	21%	17%	8%	207-208-209	16.4
Literary Text: Language, Craft, and Structure	30%	25%	22%	14%	6%	205-207-208	16.2
Informational Text: Language, Craft, and Structure	22%	22%	31%	20%	8%	209-210-211	14
Vocabulary: Acquisition and Use	22%	26%	21%	18%	13%	210-211-212	15.9
Informational Text: Key Ideas and Details	26%	25%	24%	17%	8%	207-208-209	14.8

The overall student performance shows a congregation of scores below average, having twenty-six percent (26 %) and twenty-eight percent (28 %) of the students.

Out of the five reading goals, Vocabulary Acquisition and Use results have the highest mean score of 211 with a standard deviation of 15.9. Despite the widely spread scores, the students have the highest mean score in these areas. It suggests that the students can make sense of words and recognize and comprehend word relationships and structures. Likewise, the students can use context cues to decipher word meaning. Nevertheless, it should be noted that this level is still lacking in meeting the target growth, which is 214.2. Based on the DesCartes: A Continuum of Learning, Vocabulary for the Web-based MAP system,

these are the words that students need to be familiar with: allusion, appendix, cause, characterization, characterize, chronological, classified ad, connotation, coupon, debate, diagram, exposition, falling action, flashback, foreshadowing, guide letters, headline, hyperbole, idiom, imagery, instruction, irony, memo, memorandum, metaphor, narrate, onomatopoeia, parable, personification, persuasive, picture book, prediction, present tense, primary source, primary source historical document, pun, quote, research paper, resolve, revision, subject, suspense, thesis paper and wordplay (Northwest Evaluation Association, 2011). According to Ellis (1995), there are different facets of vocabulary building that must be considered, and it requires several learning processes like developing skills in recognizing patterns and producing written or spoken word forms. Furthermore, it requires explicit learning processes with corresponding coping strategies.

The second highest mean score of 210 falls on Informational Text: Language, Craft, and Structure. Most of the students have a more clustered score near the 210-mean score. The results reveal that the students can, to some extent, evaluate a text for bias and the quality of claims and evidence, including the evaluation of the author's craft, the author's point of view, and purpose. Furthermore, the students have difficulties in analyzing the structure of texts which Hess (2008) enumerated in his research according to increasing difficulty: sequence/process, description, time order/chronology, proposition/support, compare/contrast, problem/solution, cause/ effect, inductive/deductive, and research.

Evenson, McIver, Ryan, and Schwols (2013) described key ideas and details as the students' competence to determine the main ideas and specifics. To both Literary Texts and Informational Texts, Key Ideas have a 208-mean score. Both goal areas are shown to have an unsatisfactory proficiency from the students. Still, Literary Texts' standard deviation of 16.4 shows that most students are below the average of the expected proficiency level and have a massive gap between advanced and low-performing students. On the other hand, Informational Text's standard deviation shows a minor difference in the numbers of high and low performing students. The low mean score suggests that students have yet to reach the target growth. They still lack comprehension of literary texts, making inferences and predictions, drawing conclusions, and even citing textual support. Determining central ideas, analyzing the development of arguments, and summarizing are still in the process of achieving a proficient level. Wichadee (2012) conducted a study in which students' abilities were compared before, and after the reading intervention, transactional strategies were executed precisely.

The findings showed a noteworthy difference and improvement in their reading and summary writing skills and language competency.

Finally, the Literary Text: Language, Craft, and Structure result show that the students have lower proficiency with a 207 mean score than the other mean scores of each goal area. Likewise, the scores' distribution heavily converges below the average scale. This might be due to difficulties in analyzing the structure of literary texts, evaluating the author's craft and purpose, interpreting figurative language, and analyzing literary devices.

CONCLUSIONS

The conclusive outcome of the study shows a substantial number of students not meeting the target growth for Grade 7 level. Forty-five percent of the students have an average to a high level of proficiency, while the remaining fifty-five percent show alarmingly low to low average proficiency levels. All these results were made possible by the MAP test results. It is undeniable that MAP Growth assists schools in measuring students' academic growth in core subjects and identify skills that need improvement. However, the research has its limitations in helping to identify specific variables that affected the students' success with their reading abilities.

Relatedly, MAP testing critically impacts their Advanced Placement (A.P.) course when students reach Grade 12 in high school. The Advanced Placement course gives students the head start in developing skills needed to tackle college-level work while still in high school. In addition, by taking A.P. exams, students can earn college credit and placement. Therefore, MAP testing will be beneficial as it tracks and gathers data that comprises students' performance and credits in preparation for the tertiary level.

Meanwhile, the findings create vital implications for teachers. Teachers are always encouraged to update their teaching abilities and monitor their students' progress. With the provided results, teachers can take the opportunity to reflect on the current teaching strategies they have been using and try different approaches tailored to students' needs. For example, as mentioned earlier, the transactional theory might be worth trying with the teachers' facilitation. Furthermore, specific classroom accommodations and instructional modifications can differentiate learning and cater to students in varying reading proficiency levels. Teachers can also collaborate and do co-teaching as part of an action plan.

Concerns and suggestions must be put forward and discussed with the Middle School Coordinator and the Principal. There might be a need to modify

the curriculum and introduce remediation programs targeting the reading skills mentioned. In addition, as the school does not have after-class programs, a resource room, and tutorial services yet, it might be the best time to include them as part of school intervention.

Overall, research has proven the importance of assessing students' level of proficiency as it helps the students, teachers, and other stakeholders. The findings can also encourage future studies to improve the students' reading abilities and determine factors affecting their academic success.

TRANSLATIONAL RESEARCH

Moreover, the study's findings are worth disseminating in publication platforms to encourage other teachers and institutions to assess their students' level of reading proficiency. Results are valuable insights to help develop action plans containing reading remediations for weak readers and enrichment activities for advanced readers. Likewise, related experts such as reading interventionists and special education teachers may be interested in the results and develop helpful action research to answer existing and new problems.

ACKNOWLEDGEMENTS

The researchers would like to show their sincerest appreciation to their parents, children, and siblings for their support. They would also wish to thank their colleagues and classmates for their tremendous insights into the study.

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