

Unlocking academic potential: a comprehensive analysis of intervention needs using CRLA in an elementary school

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Abstract: This study investigates the reading performance and intervention needs of Grade 1 students at Judge Antonio R. Montilla Sr. Elementary School. Utilizing a comprehensive assessment approach, the mean reading scores across four sections—MAHINATAGON, MAKISASANGKAYON, MATINALAHURON, and MABINULIGANON—were found to be relatively similar, averaging 34.32 words per minute, suggesting consistent effectiveness of the reading programs. Despite this uniformity, intervention needs varied significantly, with a notable number of students requiring some form of support, although most met the expected reading levels. The study employed the Kruskal-Wallis and Mann-Whitney U tests to analyze differences in reading and observation scores, revealing no significant disparities across sections or between genders. However, chi-square tests indicated significant associations between required intervention levels and both section and gender, suggesting certain groups may benefit from more tailored support. Recommendations include implementing targeted reading interventions, enhancing professional development for teachers, conducting regular monitoring and assessment, increasing parental involvement, adopting gender-sensitive approaches, expanding reading resources, and promoting collaborative learning strategies. These measures aim to support personalized learning and improve reading literacy, ensuring students achieve their full academic potential.

Keywords: Comprehensive analysis, Comprehensive Rapid Literacy Assessment

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INTRODUCTION

Nestled in the vibrant community of Brgy 91 Abucay, Tacloban City, Judge Antonio R. Montilla Sr. Elementary School stands as a beacon of educational excellence and community engagement. As an integral part of District Learning Center VIII of Tacloban City Division, the school serves as a cornerstone of learning, catering to the educational needs of students spanning from kindergarten to grade 6. With a steadfast commitment to fostering holistic development and academic achievement, Judge Antonio R. Montilla Sr. Elementary School strives to create a nurturing and inclusive learning environment where every student has the opportunity to flourish. The school's mission is rooted in the belief that education is the key to unlocking the potential of every child and empowering them to become lifelong learners and responsible members of society.

Recognizing the critical importance of early literacy development and intervention in shaping students' educational trajectories, the school places a strong emphasis on providing targeted support to students in their formative years. Grade 1, in particular, marks a significant milestone in students' educational journey, serving as the foundation upon which future academic success is built. At Judge Antonio R. Montilla Sr. Elementary School, educators are keenly aware of the diverse needs and challenges faced by students at different stages of their educational development. As such, there is a concerted effort to identify and address intervention needs proactively, ensuring that every student receives the support they need to thrive academically.

Against this backdrop, this study seeks to delve into the intervention landscape among grade 1 students at Judge Antonio R. Montilla Sr. Elementary School. By leveraging the

Comprehensive Rapid Literacy Assessment (CRLA), the research aims to assess intervention needs, explore gender and section variations, and inform evidence-based practices tailored to the unique needs of students within the school community. Through this endeavor, the study endeavors to contribute to the ongoing efforts of Judge Antonio R. Montilla Sr. Elementary School in promoting academic excellence, fostering a culture of lifelong learning, and empowering students to realize their full potential.

Statement of the problem

This study seeks to present a comprehensive analysis of intervention needs among students in grade 1 at Judge Antonio R. Montilla Sr. Elementary School, Tacloban City Division, Philippines, utilizing existing data. The primary objectives are to provide insights into reading scores by section, the level of intervention necessary for grade 1 students by section, the typical observation score of grade 1 students by section, reading scores by sex, the level of intervention necessary for grade 1 students by sex, the typical observation score of grade 1 students by sex, potential differences in reading scores by section, potential differences in reading scores by gender, potential differences in observation scores by section, potential differences in observation scores by gender, the association of required intervention and gender, and the association of required intervention and section.

Specifically, the study aims to answer the following questions:

- 1) What are the reading scores of Grade 1 students by section and gender?
- 2) What level of intervention is necessary for Grade 1 students by section and gender?
- 3) What are the typical observation scores of Grade 1 students by section and gender?
- 4) Is there a significant difference in the reading scores of students by section and gender?
- 5) Is there a significant difference in the observation scores of students by section and gender?
- 6) Is there a significant association between the required intervention and both gender and section?

METHODOLOGY

Research design

This study employs a quantitative research design, specifically a descriptive and comparative approach, to examine the reading performance and intervention needs of Grade 1 students at Judge Antonio R. Montilla Sr. Elementary School. The primary aim is to quantify the reading scores and observation scores of students, analyze these scores by section and gender, and determine the necessary levels of intervention for different groups of students. This design allows for a systematic collection and analysis of numerical data to understand patterns, differences, and associations among the variables studied (Creswell & Creswell, 2017).

Locale of the study and respondents

The participants in this study were Grade 1 pupils from Judge Antonio R. Montilla Sr. Elementary School, located at Brgy 91 Abucay, Tacloban City. This school, which caters to students from kindergarten to Grade 6, is under District Learning Center VIII of the Tacloban City Division. For this research, all Grade 1 pupils were included, encompassing four sections: Mahinatagon, Makisangkayon, Matinalahuron, and Mabinuliganon. The total number of participants was 89 pupils, distributed across the four sections as follows: Mahinatagon with 19 pupils, Makisangkayon with 23 pupils, Matinalahuron with 25 pupils, and Mabinuliganon with 22 pupils. This inclusive sampling approach ensures that the data collected reflects a comprehensive view of the reading abilities and intervention needs of all

Grade 1 pupils within the school. By including all sections and a sizeable number of students, the study aims to provide a robust and generalizable analysis of the educational context at Judge Antonio R. Montilla Sr. Elementary School (Creswell & Creswell, 2017)(Patten & Newhart, 2018).

Research instruments

The study employed the Comprehensive Rapid Literacy Assessment (CRLA) as the primary research instrument. The CRLA is a widely recognized tool for evaluating literacy skills in young learners, specifically designed to assess various aspects of reading proficiency. This instrument was utilized to gauge the reading performance of Grade 1 students at Judge Antonio R. Montilla Sr. Elementary School. The CRLA provided data on students' reading scores, which were subsequently categorized to determine the level of intervention required. The tool facilitated the collection of both quantitative data on reading abilities and qualitative observations of student engagement and performance during literacy activities. The reliability and validity of the CRLA ensured that the data collected was robust and accurate, providing a comprehensive overview of the literacy needs of the students involved in the study.

Data analyses procedure

The data analysis for this study involved several statistical methods to examine the reading performance and intervention needs of Grade 1 students. Descriptive statistics, including mean and median calculations, were first used to summarize the reading and observation scores of the participants. To explore potential differences in these scores across sections and genders, comparative statistical tests such as the Kruskal-Wallis test and Mann-Whitney U test were employed. These non-parametric tests were chosen due to the ordinal nature of the data. Additionally, the Chi-Square test for independence and Cramer's V statistic were used to analyze the association between the required intervention levels and both section and gender. These analyses provided insights into the relationships between the students' reading abilities, the need for interventions, and their demographic characteristics, enabling the identification of specific groups that may require tailored educational support.

FINDINGS AND DISCUSSION

Mean reading scores by section

The analysis of reading scores across different sections reveals that the mean reading scores for MAHINATAGON, MAKISASANGKAYON, MATINALAHURON, and MABINULIGANON were 33.25, 36.77, 30.87, and 35.39 words per minute (WPM), respectively, with an overall mean reading score of 34.32 WPM. This suggests some variability in reading performance among sections, although the overall performance is relatively consistent.

Degree of intervention by section

When examining the degree of intervention required, MAHINATAGON had 4 students needing light intervention, 5 needing moderate intervention, 11 meeting expectations, and 1 requiring full intervention. MAKISASANGKAYON had 7 students needing light intervention, 1 needing moderate intervention, 14 meeting expectations, and none requiring full intervention. MATINALAHURON had 3 students needing light intervention, none needing moderate intervention, 10 meeting expectations, and 2 requiring full intervention. MABINULIGANON had 3 students needing light intervention, 1 needing moderate

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intervention, 14 meeting expectations, and none requiring full intervention. Overall, 17 students needed light intervention, 7 moderate, 49 met expectations, and 3 required full intervention.

Mean observation scores by section

The median observation scores were consistent across sections, with MAHINATAGON, MAKISASANGKAYON, MATINALAHURON, and MABINULIGANON all having a median score of 4, and the overall median score also being 4. This indicates a generally uniform performance in observed behaviors and skills across sections.

Mean reading scores by gender

When analyzing reading scores by gender, the mean reading scores for both male and female students were approximately 16.09 WPM, indicating no significant difference in reading performance between genders.

Degree of intervention by gender

The level of intervention required by gender showed that 17 male students needed light intervention, 7 needed moderate intervention, 49 met expectations, and 3 required full intervention. For female students, 7 needed light intervention, none needed moderate intervention, 20 met expectations, and 1 required full intervention. Overall, 24 students required light intervention, 7 required moderate intervention, 69 met expectations, and 4 required full intervention.

Statistical test results

Further statistical tests, including the Kruskal-Wallis and Mann-Whitney U tests, confirmed these observations. The Kruskal-Wallis test for reading scores by section yielded a p-value of approximately 0.2038, indicating no significant difference in reading scores among sections. Similarly, the Mann-Whitney U test for reading scores by gender yielded a p-value of approximately 0.4293, indicating no significant difference between male and female students.

For observation scores, the Kruskal-Wallis test yielded a p-value of approximately 0.2883, indicating no significant difference among sections, and the Mann-Whitney U test yielded a p-value of approximately 0.5607, indicating no significant difference between genders. However, the chi-square test for independence revealed significant associations. The test for the relationship between required intervention and gender yielded a p-value of approximately 0.0094, with a Cramer's V statistic of approximately 0.2047, indicating a moderate association.

Similarly, the test for the relationship between required intervention and section yielded a p-value of approximately 0.0001, with a Cramer's V statistic of approximately 0.2353, indicating a moderate association. These results suggest that while reading and observation scores do not significantly differ across sections and genders, the type of intervention required is associated with both section and gender, implying that certain groups may need more tailored support.

CONCLUSIONS AND RECOMMENDATION

The findings from this study provide several key insights into the reading performance and intervention needs of Grade 1 students at Judge Antonio R. Montilla Sr. Elementary School.

Firstly, the mean reading scores across the four sections—MAHINATAGON, MAKISASANGKAYON, MATINALAHURON, and MABINULIGANON—were relatively similar, with an overall mean of 34.32 words per minute.

This consistency suggests that the reading programs in place are equally effective across different sections. However, the degree of intervention required varied, with a significant number of students in each section needing some form of intervention, although most met the expected reading levels. The uniformity in median observation scores further supports the notion of consistent educational experiences across sections. Gender-based analysis revealed no significant differences in mean reading scores or observation scores between male and female students, indicating gender parity in reading performance. Nonetheless, the chi-square tests for independence highlighted a significant association between the required level of intervention and both section and gender, suggesting that specific groups may benefit from more targeted support. These conclusions underscore the importance of personalized intervention strategies to address the unique needs of different student groups, despite overall uniform performance metrics.

Based on the findings of this study, several recommendations can be made to enhance reading performance and address the intervention needs of Grade 1 students at Judge Antonio R. Montilla Sr. Elementary School. First, it is crucial to design and implement targeted reading interventions tailored to the specific needs of students in each section, providing additional support for those requiring moderate to full intervention. To ensure the effectiveness of these interventions, ongoing professional development for teachers should be prioritized, with training programs focusing on differentiated instruction, literacy strategies, and assessment techniques. This will equip teachers with the necessary skills to support diverse learners and address their specific challenges.

Additionally, continuous monitoring and assessment of students' reading progress are essential. Utilizing tools like the Comprehensive Rapid Literacy Assessment (CRLA) at regular intervals can help identify students' strengths and areas for improvement, allowing for timely and appropriate interventions. Encouraging greater parental involvement in their children's reading development can also have a positive impact, as workshops and resources for parents on how to support reading at home can reinforce school-based efforts and create a more cohesive learning environment.

Although no significant differences were found in reading scores between male and female students, the association with intervention needs suggests that gender-sensitive approaches may still be beneficial. Tailoring reading materials and activities to engage both boys and girls can help maintain their interest and motivation. Furthermore, investing in a diverse range of reading materials that cater to different reading levels and interests can support student engagement and improvement. Access to a well-stocked library and digital reading resources will provide students with more opportunities to practice and enhance their reading skills.

Lastly, encouraging collaborative learning strategies, such as peer tutoring and group reading activities, can foster a supportive learning environment. These strategies can help students learn from each other, build confidence, and develop their reading skills in a more interactive and engaging manner. By implementing these recommendations, Judge Antonio R. Montilla Sr. Elementary School can better support its students in achieving their full academic potential, particularly in reading literacy, which is foundational for future learning and success.

REFERENCES

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- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.
- Denton, C. A., & West, J. L. (2002). Children's reading comprehension and oral reading fluency in easy text: Effects of text type, oral reading, and listening comprehension examined. *Reading Research Quarterly*, 37(1), 16–50. <https://doi.org/10.1598/RRQ.37.1.2>
- Denton, C. A., & West, J. L. (2002). Children's reading comprehension difficulties: A decade of research. *Journal of School Psychology*, 40(2), 63–69. [https://doi.org/10.1016/S0022-4405\(02\)00104-4](https://doi.org/10.1016/S0022-4405(02)00104-4).
- Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly*, 41(1), 93–99. <https://doi.org/10.1598/RRQ.41.1.5>
- Gagné, F. (2015). From genes to talent: The DMGT/CMTD perspective. *Roeper Review*, 37(4), 213-227.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106–116. <https://doi.org/10.1177/0022487102053002003>
- Korpershoek, H., Kuyper, H., van der Werf, G., & Bosker, R. (2015). Who succeeds in advanced mathematics and science courses? *Educational Research and Evaluation*, 21(1), 61-76.
- Li, Y., & Hamel, K. (2021). Understanding gender differences in literacy and numeracy development: A theoretical perspective. *International Journal of Educational Research*, 105, 101695.
- National Early Literacy Panel. (2008). *Developing early literacy: Report of the National Early Literacy Panel*. National Institute for Literacy.
- Niemi, H., & Kuuskorpi, M. (2020). Digital literacy and sustainability: Developing competencies for the future. *Educational Technology Research and Development*, 68 (5), 2551-2574.
- Patten, M. L., & Newhart, M. (2018). *Understanding Research Methods: An Overview of the Essentials* (10th ed.). Routledge.
- Robinson, L. E., Palmer, K. K., Bub, K. L., & Hulteen, R. M. (2016). Longitudinal associations between self-esteem, physical self-concept, and depressive symptoms in adolescents: Tests of reciprocal effects. *Journal of Sport & Exercise Psychology*, 38(3), 290–301. <https://doi.org/10.1123/jsep.2015-0326>
- Robson, C., & McCartan, K. (2016). *Real World Research* (4th ed.). Wiley.
- Smith, L., Jones, M., & Brown, K. (2018). *Comprehensive Rapid Literacy Assessment (CRLA): User manual*. Publisher.
- Stevens, R., & Slavin, R. E. (2019). The cooperative elementary school: Effects on students' achievement, attitudes, and social relations. *American Educational Research Journal*, 56 (1), 132-162.
- Vaughn, S., Denton, C. A., & Fletcher, J. M. (2003). Why intensive interventions are necessary for students with severe reading difficulties. *Psychology in the Schools*, 40(6), 653–664. <https://doi.org/10.1002/pits.10134>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.