



**MEANINGFUL ANALYSIS OF CASUAL ENTERTAINMENT (MACE):  
DEVELOPING READING SKILLS THROUGH GAMING EXPERIENCES  
OF GRADE 5-A OF KAMANGA ELEMENTARY SCHOOL**

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**ABSTRACT**

Department of Education recognizes the challenge and has introduced supplementary interventions to strengthen learners' reading skills. These efforts are vital not only for enhancing individual learner's achievements but also for improving the nation's overall educational performance and global competitiveness. The study utilized a quasi-experimental design to assess the reading improvement of Grade 5-A pupils at Kamanga Elementary School before and after implementing the MACE approach, utilizing data from the Philippine Informal Reading Inventory (Phil IRI). The research involved pupils from Kamanga Elementary School, with statistical analysis employing z-tests to determine the significance of the changes in reading scores. Descriptive statistics defined the data's mean and standard deviation, while inferential statistics evaluated the improvement's significance. Additionally, a focus group discussion was held to interpret the statistical findings and understand the aspects of implementing the MACE approach. The findings of this study demonstrate a significant improvement in the reading and comprehension performance of Grade 5-A pupils using MACE (Meaningful Analysis of Casual Entertainment) approach. The data indicates a substantial shift from high levels of frustration to increased levels of instructional and independent reading. Specifically, the proportion of pupils who read with guidance increased, and the number of learners with reading difficulty decreased.

**Keywords:** *Reading Improvement, Instructional, Independent Reading, Modified Assisted, Corrective Education*

## INTRODUCTION

Research on the relationship between reading and games has shown various insights. Studies like Ronimus et al. (2019) have explored how digital game-based learning can support struggling readers, indicating positive outcomes for children with poor word-decoding skills. Reading proficiency has emerged as a critical challenge in the realm of education, evidenced by its significant impact on students' overall academic performance, as highlighted by the PISA results of 2018. This issue has become a pivotal factor affecting students' performance across various test fields, underscoring the urgency of addressing reading difficulties within educational systems.

The Department of Education recognizes the seriousness of the challenge and has introduced supplementary interventions to strengthen students' reading skills. These efforts are vital not only for enhancing individual student achievements but also for improving the overall educational performance of the nation and its global competitiveness. As part of these initiatives, the department has launched "Catch-Up Friday," designating Fridays as dedicated reading days. Teachers are tasked with finding innovative ways to make these sessions more productive and meaningful for learners.

A comprehensive assessment of the researcher's advisory class, specifically Grade 5-A, revealed a concerning distribution of reading abilities. Among the students, there were twelve (12) struggling readers, and eighteen (16) excellent readers. This stark contrast in reading proficiency levels within a single classroom underscores the pressing need for targeted interventions to support non-readers and struggling readers, with the overarching goal of elevating their reading performance to align with their peers.

The Meaningful Analysis of Casual Entertainment (MACE) approach paves the path for enhancing reading comprehension through gaming. This presents a critical challenge for educators and policymakers, emphasizing the need to craft customized strategies that meet students' diverse learning needs. By tackling these challenges directly and adopting evidence-based practices, educational institutions can boost reading proficiency and overall academic success among learners.

### Research Questions

Considering past research, the researcher has developed an educational strategy that enables pupils to engage with the MACE approach, create investigations, and discuss findings. The researcher, therefore, targeted the following research objectives:

1. What are the reading performance levels of Grade 5-A pupils before the MACE approach?
2. What are the reading performance levels of Grade 5-A pupils after the MACE approach?

3. Is there a significant difference in the reading performance levels of Grade 5-A pupils before and after the MACE approach?

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## **METHODOLOGY**

The research employed quasi-experimental research to test the improvement of Grade 5-A pupils at Kamanga Elementary School from the time without intervention to implementing the MACE approach. The study utilized data from the Philippine Informal Reading Inventory (Phil-IRI) collected at the beginning and end of the school year from 28 Grade 5-A pupils at Kamanga Elementary School. This analysis involved using appropriate statistical techniques, such as z-tests to compare the means or distributions of reading scores before and after the intervention. The goal is to ascertain whether the observed improvements in reading performance are statistically significant and not merely due to chance.

The researcher used descriptive and inferential statistics. Descriptive statistics defined the mean and standard deviation of the surveyed data, while inferential statistics determined the significance of the improvement in reading performance of the pupils.

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## **RESULTS and DISCUSSION**

Before the MACE approach, the reading performance levels of Grade 5–A pupils varied significantly. Out of 28 pupils, 46% (13 pupils) were classified as guided readers, requiring some assistance to comprehend texts. Additionally, 43% (12 pupils) were struggling readers who found the material challenging and experienced comprehension difficulties. Only 11% (3 pupils) were independent readers who could read and understand texts on their own. There were no non-readers in the class.

After the MACE approach, the reading performance levels of Grade 5–A pupils showed notable improvement. According to the Phil-IRI assessment, 82% (23 pupils) reached the instructional level, reading with some teacher assistance, which helped them better understand the material and reduced the number of pupils in the frustration level. There are 14% (4 pupils) became independent readers, able to read and comprehend texts on their own. Only 1 pupil (4%) continued to experience significant difficulty, remaining in the frustration level.

There is a significant difference in the reading performance levels of Grade 5-A pupils before and after the MACE approach. The statistical analysis showed a computed z-value of 2.508, which is greater than the z-tabular value, and a p-value of 0.016, indicating statistical significance at the 0.05 level. These results confirm a significant improvement in reading and comprehension performance after the implementation of the MACE approach, suggesting its effectiveness in enhancing pupils' reading skills.

**Table 1: Level of Reading and Comprehension Performance of Grade 5-A pupils BEFORE the MACE approach**

<b>Level of Reading and Comprehension</b>	<b>Frequency</b>	<b>Percentage</b>
Independent	3	11
Instructional	13	46
Frustration	12	43
Non-Reader	0	0
<b>Mean</b>	<b>28</b>	<b>100</b>

The data presented in Table 1 provides a comprehensive overview of the reading and comprehension performance levels of Grade 5–A pupils at the onset of the academic year, as assessed by the Phil-IRI tool. This assessment reveals a diverse range of reading abilities within the class of 28 pupils. Notably, 13 pupils, comprising 46% of the class, are classified as guided readers. These pupils can read with some assistance or guidance from a teacher, which helps them to better understand the reading material.

The presence of such a significant portion of guided readers underscores the importance of supportive instructional practices that can bridge the gap between assisted and independent reading. According to Vygotsky’s theory of the Zone of Proximal Development, guided learning is crucial for pupils who are on the brink of achieving higher levels of comprehension with appropriate scaffolding (Vygotsky, 1978).

The assessment indicates that 12 pupils, or 43% of the class, are struggling readers who find the reading material too challenging, leading to frustration and difficulty in comprehension. This substantial percentage highlights a critical need for targeted interventions. Research by Allington (2013) emphasizes the importance of providing struggling readers with texts at their instructional level and using differentiated instruction to meet their specific needs. Without such interventions, these pupils risk falling further behind, which could impact their overall academic performance and self-esteem.

On a positive note, 3 pupils, representing 11% of the class, are identified as independent readers who can read and comprehend texts on their own without requiring significant assistance. These pupils demonstrate strong reading skills and are likely to benefit from advanced and enriched reading activities that can further challenge their abilities and maintain their interest in reading. The existence of independent readers in the class is encouraging, as it indicates that the instructional strategies in place are effective for some pupils.

As suggested by Fountas and Pinnell (2017), providing these pupils with opportunities for deeper exploration of texts can promote higher-order thinking skills and a lifelong love of reading.

Interestingly, no non-readers were reported at the start of the academic year, which is a positive indication that all pupils possess at least basic reading skills. This baseline suggests that the class has the potential

**Table 2. Level of Reading and Comprehension of Grade 5-A pupils AFTER the MACE approach**

<b>Level of Reading and Comprehension</b>	<b>Frequency</b>	<b>Percentage</b>
Independent	4	14
Instructional	23	82
Frustration	1	4
Non-Reader	0	0
<b>Mean</b>	<b>28</b>	<b>100</b>

Table 2 presents the reading and comprehension performance levels of Grade 5-A pupils at the end of the academic year. According to the Phil-IRI (Philippine Informal Reading Inventory) assessment, among the twenty eight (28) pupils assessed at the start of the school year, twenty three (23) pupils which is (82%) read with some assistance or guidance from a teacher, enabling them to understand the reading material more effectively. This result falls within the frustration level, indicating a decrease in the number of pupils who struggle significantly with reading and find the material too challenging, thus leading to a high increase in the instructional level.

There are four (4) pupils which is (14%) are capable of reading and comprehending texts on their own without requiring significant assistance or support. Fortunately, only one (1) pupil struggles significantly with reading, finding the material too challenging, which leads to frustration and difficulty in comprehension.

According to Pressley et al. (2006), guided reading and teacher support are crucial for improving reading comprehension among pupils who initially struggle with reading. The results align with the findings of Lyon et al. (2001), which emphasize the importance of instructional support in helping pupils transition from frustration to instructional levels of reading proficiency.

**Table 3. Analysis on the Level of Reading and Comprehension Grade 5-A pupils BEFORE and AFTER the MACE approach**

<b>Variables</b>	<b>z computed</b>	<b>df</b>	<b>p-value</b>	<b>Result</b>
Before - After	2.508	27	0.016	Significant

The findings presented in Table 7 illustrate a substantial difference in the level of reading and comprehension among the Grade 5-A pupils. The statistical analysis utilized a comparison between the z-tabular value and the computed z-value to assess the significance of the results.

As it reveals, the computed z-value of 2.508 is greater than the z-tabular value, indicating a significant increase in the performance of reading and comprehension among the Grade 5-A pupils. This is further supported by a p-value of 0.016, which is less than the 0.05 threshold for statistical significance. Thus, the results confirm that the increase in performance is significant. This finding underscores the relevance of the data presented in Tables 5 and 6 and suggests that the MACE (Meaningful Analysis of Casual Entertainment) approach was effective in improving the reading and comprehension skills of the pupils.

According to Cohen et al. (2007), the use of statistical methods to measure educational outcomes provides a robust framework for evaluating the effectiveness of instructional strategies. Similarly, Hattie (2009) emphasizes the importance of evidence-based teaching practices in enhancing pupils learning outcomes, which aligns with the significant improvements observed in this study.

The integration of technology, particularly computer-assisted instruction (CAI), has shown promise in supporting independent reading. CAI programs provide students with opportunities for active engagement and immediate feedback, which are essential for skill acquisition (Cullen et al., 2014). The use of assistive technologies, as discussed by King (2015), can also empower students with reading difficulties to achieve levels of comprehension comparable to their peers. This technological support not only aids in skill development but also fosters a sense of independence as students navigate reading tasks on their own.

## **Conclusions**

The following conclusions are drawn based on the findings of the study.

The significant gains observed in this study indicate that structured, supportive instructional strategies such as the MACE approach can effectively address diverse reading needs in the classroom. The findings suggest that adopting evidence-based teaching practices can lead to meaningful improvements in pupils' performance, fostering better academic outcomes and increased confidence in reading. This study supports the continued use and refinement of the MACE approach and similar methodologies to enhance reading and comprehension skills among pupils.

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## **Recommendations**

From the salient findings of this study and the conclusion reached, the following recommendations are presented;

1. Maintain and regularly refine the MACE approach to ensure it continues to meet the evolving needs of pupils.
2. Provide continuous professional development opportunities for teachers to equip them with the latest evidence-based instructional strategies.
3. Conduct early and regular assessments of pupils' reading abilities using tools like the Phil-IRI to identify struggling readers promptly.
4. Engage parents in their children's reading development by providing resources and strategies they can use at home.
5. Establish a system for regular monitoring and evaluation of reading programs to assess their effectiveness.
6. Encourage further research into innovative reading strategies and interventions.

### **Compliance with Ethical Standards**

The author affirms that there are no conflicts of interest related to this study. Ethical approval was obtained before the commencement of the research, and informed consent was acquired from all respondents involved. No specific funding was received for this research from any public, commercial, or not-for-profit organizations. The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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### **REFERENCES**

- Allington, R. L. (2013). What Really Matters When Working with Struggling Readers. *\*The Reading Teacher*, 66\*(7), 520-530. doi:10.1002/trtr.1154
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2007). *\*Applied multiple regression/correlation analysis for the behavioral sciences\** (3rd ed.). Routledge.
- Cullen, J., Alber-Morgan, S., Schnell, S., & Wheaton, J. (2014). Improving reading skills of students with disabilities using headsprout comprehension. *Remedial and Special Education*, 35(6), 356-365. <https://doi.org/10.1177/0741932514534075>
- Fountas, I. C., & Pinnell, G. S. (2017). *\*Guided Reading: Responsive Teaching Across the Grades\**. Portsmouth, NH: Heinemann.

- Hattie, J. (2009). *\*Visible learning: A synthesis of over 800 meta-analyses relating to achievement\**. Routledge.
- King, R. (2015). Assistive reading technologies for struggling readers. *Mount Royal Undergraduate Education Review*, 1(3). <https://doi.org/10.29173/mruer317>
- Lyon, G. R., Fletcher, J. M., & Barnes, M. (2001). Learning disabilities: Historical perspectives. *\*Journal of Learning Disabilities*, 34\*(1), 3-22.
- Pressley, M., Mohan, L., Raphael, L. M., & Fingeret, L. (2006). *\*How to teach reading comprehension. Research-based instruction. \** New York: Guilford Press.
- Ronimus, M., Eklund, K., Pesu, L., & Lyytinen, H. (2019). Supporting struggling readers with digital game-based learning. *\*Educational Technology Research and Development*, 67\*(3), 639-663. <https://doi.org/10.1007/s11423-019-09658-3>
- Vygotsky, L. S. (1978). *\*Mind in Society: The Development of Higher Psychological Processes\**. Cambridge, MA: Harvard University Press.

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