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LEARNERS' LEAST MASTERED COMPETENCIES IN STATISTICS AND PROBABILITY: BASES FOR AN INTERVENTION PROGRAM

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ABSTRACT

This study identified the learners' least mastered competencies in Statistics and Probability among Grade 8 learners of Libertad Integrated School, District of Banate, Iloilo, for the School Year 2025–2026. Using a descriptive research design, data were collected from sixty-eight (68) learners through the Rapid Mathematics Assessment administered at the beginning of the school year. The results revealed that learners had the most difficulty in the following competencies: posing problems from tabular data, solving problems on variability, determining the probability of compound events, and explaining claims based on data. These findings indicate gaps in learners' analytical and problem-solving skills. Based on the results, the study recommends targeted instructional interventions to address these learning gaps and improve learners' performance. Intervention strategies can be highly effective in addressing learning gaps and enhancing learners' statistical literacy and problem-solving skills.

Keywords: *Least Mastered Competencies, Statistics and Probability, Descriptive Research, Rapid Mathematics Assessment, Mathematics Education*

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INTRODUCTION

Background of the Study

Mastering lesson goals is essential in education because it ensures that students gain the knowledge, skills, and understanding needed for both academic achievement and real-life situations. These competencies serve as a guide for teachers in planning lessons and evaluating student progress. When students master a lesson, they feel more confident, work better on their own, and apply what they have learned to solve problems. Conversely, if students do not master basic skills, they develop "learning gaps" that hinder their future educational success.

Mathematics is considered a fundamental subject because it helps students develop critical thinking, logic, and analytical reasoning. However, many students struggle with specific concepts, such as fractions, integers, and decimals, which indicates the presence of "least mastered competencies" that require focused intervention (Albento, 2023). These challenges often stem from a lack of practice, insufficient foundational knowledge, or ineffective teaching methods.

The Philippines faces a significant challenge in mathematics education. In the 2022 PISA study, the country ranked 77th out of 81 countries, with 84% of students failing to reach basic proficiency levels. This performance gap highlights a widespread failure to master fundamental skills and emphasizes the urgency of improving instructional standards.

At Libertad Integrated School, identifying these least mastered skills is vital, as it allows teachers to determine specific learning gaps among students. By analyzing the results of the

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Rapid Mathematics Assessment (RMA) for Grade 8, teachers can pinpoint where students struggle and develop targeted instructional strategies. Research shows that identifying these competencies provides a necessary basis for creating intervention programs and specialized materials that help students improve their performance (Villaverde et al., 2024; Bondame, 2024).

Therefore, intervention programs are necessary to help students overcome learning difficulties and improve their mastery of statistics. These programs provide the remediation, reinforcement, and targeted instruction required to address specific needs. By identifying these gaps and implementing appropriate support, teachers can help students enhance their academic performance and achieve mastery of essential learning goals (Valeroso, 2025).

This study aimed to identify the least mastered competencies of learners in Statistics and Probability and to develop an appropriate intervention program. The findings may provide a basis for teachers to design effective instructional strategies, address learning deficiencies, and ultimately improve the quality of mathematics education.

MATERIALS AND METHODS

Research Methodology

This chapter outlines the methodological framework of the phenomenological study. It provides a detailed account of the research design and methods, identifies the study's participants and sampling strategy, and explains the instruments and procedures used for

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data collection. Furthermore, it describes the specific data analysis techniques and statistical tools employed to interpret the findings.

Research Method

This study employed the descriptive research method using the previously administered assessment data, which is the Rapid Mathematics Assessment (RMA), to identify the learners' least mastered competencies in Statistics and Probability. The RMA was conducted at the start of the school year as part of a national assessment. When I started my research in January, I used those existing results for analysis.

This research method is appropriate for the present study because the goal is not to manipulate variables or test cause-and-effect relationships, but rather to describe and analyze learners' performance based on their test results. Descriptive research enables the researcher to summarize numerical data using statistical measures such as frequency, percentage score, and percentile rank to determine which competencies are least mastered by the learners (Repositori University, 2025).

According to Shinija (2024), descriptive quantitative research is widely known used in educational studies because it provides an objective description of learners' academic performance using numerical data and statistical analysis. Through this approach, researchers can identify learning gaps and use the results as a basis for developing intervention programs to improve learning outcomes.

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Therefore, the descriptive research method is considered the most suitable design for this study since it allows the researcher to analyze existing assessment data and determine the least mastered competencies in Statistics and Probability among the learners.

Research Design

To determine which specific competencies in Grade 8 Statistics and Probability were least understood by students, this study utilized a descriptive quantitative research design. As Abdullah (2022) explains, quantitative research is characterized by the systematic collection and examination of numerical information to uncover trends and associations between variables using various statistical methods.

The design is appropriate for this study because it allows the researcher to analyze learners' performance using statistical measures such as frequency, percentage score, and percentile rank. These statistical tools help describe and interpret numerical data gathered from the learners' assessment results. Through this process, the researcher can determine the competencies that learners find most difficult and provide a basis for developing appropriate intervention programs to improve learners' understanding of Statistics and Probability. Quantitative descriptive research focuses on collecting and analyzing numerical data to describe characteristics, patterns, and trends within a population without manipulating variables (Taherdoost, 2022)

Learners' performance on the Diagnostic Assessment using Rapid Mathematics Assessment (RMA) was analyzed using percentage and percentage rank to determine the level

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of mastery for each competency. The quantitative data obtained from the assessment results served as the basis for identifying the least mastered competencies.

The competencies with the lowest percentile ranks were considered the least mastered and were used as a basis for developing a targeted intervention program designed to improve learners' understanding and performance in Statistics and Probability.

In this study, the descriptive method was used to analyze the results of the assessment administered to the learners. The researcher utilized statistical analysis to pinpoint the specific competencies where students showed the lowest levels of mastery. These findings then functioned as the foundational data for designing a targeted intervention program intended to enhance student outcomes in Statistics and Probability,

Participants of the Study

The participants of the study were sixty-eight (68) Grade 8 learners of Libertad Integrated School who took the Rapid Mathematics Assessment (RMA) at the beginning of the School Year 2025–2026. The RMA is a nationally administered assessment used to evaluate learners' competencies in Mathematics.

These results were analyzed to determine the competencies in Statistics and Probability that learners have not yet mastered. The assessment covered competencies in Statistics and Probability based on the MATATAG Curriculum**,** which served as the basis for identifying the learners' least mastered competencies**.**

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Research Instrument

The study used a **Rapid Mathematics Assessment (RMA)-based test questionnaire** (see Appendix A) as the research instrument. It includes items on data interpretation, variability, and probability, which were used to determine the learners' least mastered competencies. The study uses quantitative research instruments to comprehensively identify the least mastered competencies in Statistics and Probability of Grade 8 learners at Libertad Integrated School S.Y. 2025-2026.

To evaluate mathematical proficiency, the researcher employed the Rapid Mathematics Assessment (RMA). According to Tolibas (2025), this tool is designed for efficiency, requiring only 90 minutes to provide a comprehensive diagnostic profile of a learner's skills across different mathematical subjects. The assessment includes items that evaluate learners' understanding of mathematical concepts, including Statistics and Probability. The Department of Education (DepEd) administers the Rapid Mathematics Assessment (RMA) to identify and address gaps in students' mathematical skills (Balberona, 2026).

According to Tolibas **(2025),** the Rapid Mathematics Assessment is used to evaluate students' mathematical proficiency by categorizing their performance levels and identifying learning gaps that need instructional support.

For this study, only the test items related to the Statistics and Probability competencies were analyzed to determine learners' level of mastery in these areas. The results of the

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assessment help educators analyze learners' competencies and develop an appropriate intervention program to improve mathematics learning outcomes.

Data Gathering Procedures

The dataset for this research was derived from the Rapid Mathematics Assessment (RMA) conducted at the start of the 2025–2026 school year. While the administration of this test preceded the formal commencement of the study in January 2026, the researcher obtained the necessary authorization to utilize these pre-existing results.

Following data retrieval, the information was systematically organized and tabulated to pinpoint which specific competencies in Statistics and Probability showed the lowest levels of student mastery.

Statistical Treatment of Data

The diagnostic data gathered from the RMA were evaluated using descriptive statistics, specifically focusing on frequency distributions, percentage scores, and percentile ranks to assess mastery levels for each competency.

Frequency counts were specifically employed to calculate the total number of accurate responses provided by students within each individual competency domain.

The percentage score was used to determine the level of mastery of the learners in each competency. It was computed using the formula:

$$PS = \frac{R}{N} x\ 100$$

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Where:
PS = Percentage Score
R = Number of Correct Responses
N = Total Number of learners

The researcher used the **percentage score** to determine the level of learners' mastery of the competencies in Statistics and Probability. It measures the proportion of correct responses obtained by the learners in relation to the total number of test items. The percentage score helps identify whether a competency is **mastered, least mastered, or not mastered** by the learners.

Percentile Rank was used to determine the relative standing of the learners' scores in the distribution. It shows the percentage of scores that fall below a particular score. The percentile rank indicates the position of a competency relative to the performance of the learners. Competencies with the lower percentile ranks indicate lower mastery and were identified as the least mastered competencies.

Strict adherence to ethical protocols was maintained during all phases of this research. Prior to accessing the Rapid Mathematics Assessment (RMA) data, formal authorization was granted by the school administration. All gathered information was handled with the utmost confidentiality and utilized exclusively for academic research. Furthermore, to protect the privacy of the participants, all learner identities remained strictly anonymous and were not disclosed in the final report.

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RESULTS AND DISCUSSIONS

Summary of the Study

This study aimed to identify the least mastered competencies in **Statistics and Probability** among Grade 8 learners at Libertad Integrated School as a basis for developing an intervention program. Specifically, the study sought to answer the following questions.

1. What are the learners' least mastered skills/competencies in statistics and probability?
2. What intervention program can be made based on the least mastered skills of learners in statistics and probability?

The study utilized a descriptive quantitative research design, using frequency, percentage scores, and percentile ranks to analyze data obtained from the Rapid Mathematics Assessment.

The study's participant pool comprised 68 eighth-grade students enrolled at Libertad Integrated School.

Findings of the Study

The analysis of the Rapid Mathematics Assessment results revealed several competencies where learners demonstrated very low mastery.

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The findings revealed the following:

1. Learners showed very low mastery in posing a problem from given information in a table, with a percentage score of 20.59 percent.
2. Learners also showed very low mastery in solving problems on variability, with a percentage score of 22.06 percent.
3. Learners also demonstrated difficulty determining the probability of compound events based on the information in a table, obtaining a percentage score of 36.76 percent.
4. Explaining claims made about a set of data was also identified as a challenging competency for learners, with a percentage score of 39. 71 percent.
5. Based on percentile ranking, the top least mastered competency was posing a problem from given information in a table, followed by solving problems on variability.

The findings showed that learners had the **lowest mastery in posing a problem from given information in a table,** obtaining a percentage score of **20.59%,** indicating that learners have difficulty interpreting tabular data and formulating mathematical problems from it. Similarly, learners demonstrated **very low mastery in solving problems on variability,** with a percentage score of **22.06%,** suggesting challenges in understanding measures of variation and applying them in problem-solving situations.

The results indicate that Grade 8 learners have significant difficulty in higher-order thinking skills related to Statistics and Probability, particularly in interpreting data, formulating problems, and analyzing variability. The very low percentage scores suggest that learners

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struggle not only with computation but also with understanding and applying statistical concepts in real-life contexts.

Furthermore, learners showed difficulty **determining the probability of compound events based on information presented in a table,** obtaining a percentage score of **36.76%.** Another competency identified as challenging was **explaining claims made about a set of data,** with a percentage score of **39.71%,** indicating that learners struggle with interpreting statistical information and making evidence-based conclusions.

Based on the **percentile ranking,** the **top least mastered competency** was posing a problem from given information in a table, followed by solving problems on variability. These results highlight the areas in Statistics and Probability that require immediate instructional support.

CONCLUSION

In light of the research findings, the following conclusions have been established:

The Grade 8 learners of Libertad Integrated School demonstrated **very low mastery in several competencies in Statistics and Probability,** particularly in tasks that require higher-order thinking skills such as posing a problem from given information, solving variability problems, determining probabilities from given information and Explaining claims made about set of data.

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Learners showed the **least mastery in posing a problem from given information in a table,** indicating that many learners have difficulty understanding and transforming tabular data into meaningful mathematical problems.

The results also revealed that learners experience challenges in **solving problems related to variability,** suggesting a limited understanding of statistical concepts involving measures of variation and their applications.

Learners likewise demonstrated difficulty in **determining the probability of compound events and explaining claims based on data,** which indicates weaknesses in statistical reasoning and interpretation of data.

The identification of these least mastered competencies confirms the need for **targeted instructional support and intervention programs** to improve learners' understanding and performance in Statistics and Probability.

Overall, the study concludes that identifying learners' least mastered competencies provides a **useful basis for designing appropriate intervention strategies** that can help address learning gaps and enhance learners' statistical literacy and problem-solving skills.

Implications of the Findings

The results of the study indicate that learners experience significant difficulties in competencies that require **data interpretation, analytical thinking, and statistical**

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reasoning. The very low mastery levels suggest that learners may lack sufficient exposure to meaningful learning experiences that involve analyzing data, constructing problems, and interpreting statistical results.

These findings imply the need for teachers to implement **targeted instructional strategies and intervention programs** that focus on strengthening learners' understanding of data representation, variability, and probability concepts. Instruction should emphasize **contextualized learning activities, guided practice, and real-life applications** of statistics to help learners develop deeper conceptual understanding.

Moreover, the results highlight the importance of using data-driven instruction in mathematics teaching. By identifying the least mastered competencies, teachers can design appropriate remediation strategies that address specific learning gaps and improve learners' statistical literacy.

RECOMMENDATIONS

In light of the study's findings, the researcher presents the following propositions for consideration:

Teachers should design and implement intervention programs that focus on improving learners' skills in interpreting data, solving problems involving variability, and determining probabilities of compound events.

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Mathematics teachers may incorporate more contextualized and interactive activities such as data analysis tasks, real-life problem-solving situations, and collaborative learning strategies to enhance learners' understanding of statistical concepts.

School administrators may support professional development programs that enhance teachers' pedagogical skills in teaching Statistics and Probability effectively.

Learners should be encouraged to engage in activities that involve interpreting tables, analyzing data sets, and solving probability-related problems to improve their critical thinking and problem-solving skills.

Future researchers may conduct similar studies in other schools or grade levels to further validate the findings and develop more comprehensive intervention programs for improving learners' competencies in Statistics and Probability.

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Available online at https://www.instabrightgazette.com

References

Alordiah, C. (2025). Enhancing Learning Outcomes through Formative Assessment in Africa: A Systematic Review of Practices, Challenges, and Opportunities. e-Kafkas Journal of Educational Research, 12, 592-615. doi: 10.30900/kafkasegt.1630814

Alazemi, A.F.T. Formative assessment in artificial integrated instruction: delving into the effects on reading comprehension progress, online academic enjoyment, personal best goals, and academic mindfulness. Lang Test Asia 14, 44 (2024). https://doi.org/10.1186/s40468-024-00319-8

Alvarez,N, Flores,J.O, Zambrano, S.DL(2023). the Difficulties in teaching - learning statistics and probability: A student perspective. https://doi.org/10.53358/ecosacademia.v8i16.772

Bakker, A., et al. (2022). Competency development and student learning progress in modern education.

Balberona, J.C(2026). Effectiveness of Rapid Mathematics Assessment Program for Primary Grade Pupils. doi:10.70838/pemj.520609, ISSN 2822-4353

Batanero, C., Álvarez-Arroyo, R. Teaching and learning of

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

probability. ZDM Mathematics Education 56, 5–17 (2024). https://doi.org/10.1007/s11858-023-01511-5

Brown, G. T. L. (2022). The past, present and future of educational assessment: A transdisciplinary perspective. Frontiers in Education. https://doi.org/10.3389/feduc.2022.1060633

Dayta, D. (2022). Developing a Localized and Context-Driven Approach for Improving the Instruction of Statistics and Probability in Secondary Level in the Philippines Bridging the Gap: Empowering and Educating Today's Learners in Statistics. Proceedings of the Eleventh International Conference on Teaching Statistics. DOI:10.52041/iase.icots11.t14a1

Fisher, D., Frey, N., Almarode, J., & Hattie, J. (2021). The distance learning playbook for college and university instruction. (Vols. 1-0). Corwin, https://doi.org/10.4135/9781071838532

Foster, H. (2024). The impact of formative assessment on student learning outcomes: A meta-analytical review. Academy of Educational Leadership Journal, 28(S1), 1–3.

García-Moriyón, F., & Rebollo, I. (2022). Adolescents' development of critical and logical thinking in education. Thinking Skills and Creativity, 44, 101022.

Hase, A., Kuhl, P. Teachers' use of data from digital learning platforms for instructional design: a systematic review. Education Tech Research Dev 72, 1925–1945 (2024). https://doi.org/10.1007/s11423-024-10356-y

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Huey, M.E, Silvey, P.R, Vaughan, A.G, Fisher, A.L Assessing the impact of standards-based grading policy changes on student performance and practice work completion in secondary mathematics. doi.org/10.1016/j.stueduc.2022.101211

Insorio, A. O. (2024). Addressing student diversity to improve mathematics achievement through differentiated instruction. International Journal of Professional Development, Learners and Learning, 6(1), ep2406. https://doi.org/10.30935/ijpdll/14462

Insorio, A.O. (2024). Integration of differentiated instruction to improve STEM students' mathematics engagement and academic performance. International Journal of Didactical Studies, 5(2),27678 https://doi.org/10.33902/ijods.202427678

Insorio, A., & Librada, A. R. (2024, February 19). Differentiated Instruction in Mathematics Classes: Increasing Student's Mathematics Performance and Engagement in Statistics and Probability. Puissant, 5, 2047-2073. Retrieved from //puissant.stepacademic.net/puissant/article/view/377

Khor, E. T., Chee, A., & Lee, S. S. (2025). Beyond the Numbers: K-12 Teachers' Experiences, Beliefs, and Challenges in Developing Data Literacy. Education Sciences, 15(11), 1527. https://doi.org/10.3390/educsci15111527

Kim, S. J., & Xin, Y. P. (2024). A Meta-Analysis of

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Technology-Based Word-Problem Interventions for Students with Disabilities. Education Sciences, 14(12), 1372. https://doi.org/10.3390/educsci14121372

Maskos, K., Schulz, A., Oeksuez, S.S. et al. Formative Assessment in Mathematics Education: A Systematic Review. ZDM Mathematics Education 57, 679–693 (2025). https://doi.org/10.1007/s11858-025-01696-x

Mendiola, J.A., Lahoylahoy, M.E., Magsayo,J.T.(2026). Assessment Practices in a Mathematics Classroom. Vol. 3, No. 1, pp. 74-90, January-February 2026

Moyo, S. E., Combrinck, C., & Van Staden, S. (2022). Evaluating the impact of formative assessment intervention and experiences of the standard 4 teachers in teaching higher-order-thinking skills in mathematics. Frontiers in Education, 7, 771437.doi.org/10.3389/feduc.2022.771437

Nor Aishah Mohd Ali, Ainol Sarina Ahmad Zazili*, Nor 'Asyiqin Abu, Mohd Ariff Mustafa, Shahitul Badariah Sulaiman, Nordianah Jusoh (2025). Enhancing Mathematics Proficiency among High School Students through Intervention Project. https://dx.doi.org/10.47772/IJRISS.2025.903SEDU0453

OECD (2023), Education at a Glance 2023: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en.

Pallauta,J.D, Arteaga,P, Garzón-Guerrero, A. G (2021). Secondary School

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Students' Construction and Interpretation of Statistical Tables. https://doi.org/10.3390/math9243197

Pastore, S. (2025). Teacher data literacy: A scoping review (2020–2024). Cogent Education. https://doi.org/10.1080/2331186X.2025.2592397

Rosholm, M., Tonnesen, P. B., Rasmussen, K., Overgaard, S., Vangsøe Færch, J., & Gottschau Malm, S. (2025). A tailored small group instruction intervention in mathematics benefits low achievers. npj Science of Learning, 10, 18. https://doi.org/10.1038/s41539-025-00310-9

Sanchez, J.C, Dagondon, L.M. B, (2025). Unfulfilled Potential: A Document Analysis of Spiral Progression and Curriculum Soberano, R.D, Matias, C.L.V (2024). Loa Under the Lens: An Analysis of the Least Mastered Competencies in Grade 8 Science

Svane, R. P., Willemsen, M. M., Bleses, D., Krøjgaard, P., Verner, M., & Nielsen, H. S. (2023). A systematic literature review of math interventions across educational settings from early childhood education to high school. Frontiers in Education, 8, 1229849. https://doi.org/10.3389/feduc.2023.1229849

Tucker, K. C., McCraney, M., Panesar-Aguilar, S., Cale, C.,

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Orr, L., & Blakely, J. (2022). Elementary teachers' use of data-driven instructional practices. International Journal of Advanced Multidisciplinary Research and Studies, 2(5), 312–316.

VILLAVERDE, M.J, LUSTERIO, K.J, FLANCIA, P.H, (2024). Assessment of the Least Mastered Competencies in General Mathematics: A Basis for Strategic Intervention Materials. Digital Object Identifier (DOI)ISSN 1908-7349, ISSN 3208-2985

Yazıcıoğlu, T., & Akdal, D. (2023). An Analysis of The Effects of The Early Mathematics Intervention Program on Early Mathematics Skills of Pre-School Children at Risk. Participatory Educational Research, 10(1), 237-250. https://doi.org/10.17275/per.23.13.10.1