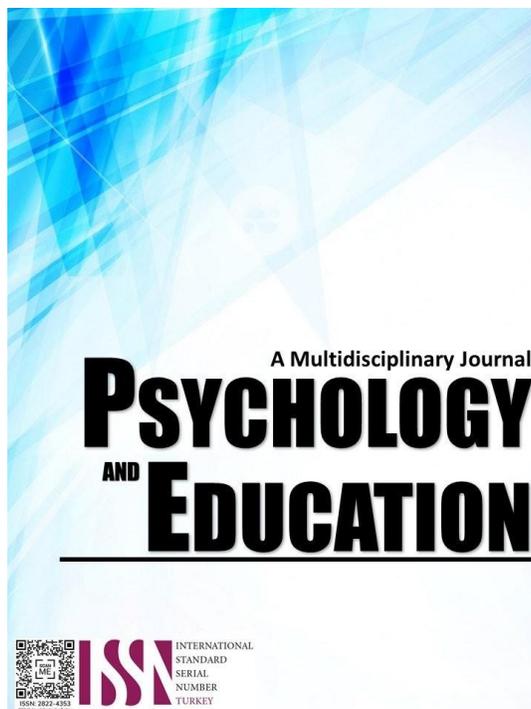


DEVELOPMENT AND EVALUATION OF CONTEXTUALIZED LEARNING MATERIALS IN MATHEMATICS 7



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Development and Evaluation of Contextualized Learning Materials in Mathematics 7

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Abstract

This study aimed to develop and evaluate contextualized learning materials in Mathematics for Grade 7 Students of Dela Paz High School in the Division of Pasig City during the school year 2023-2024. The descriptive-survey method of research was used in the study, as it was most appropriate to use since the study concentrated with the development and evaluation of the contextualized learning materials in Mathematics 7. Based on the findings, there were five topics in Mathematics 7 that could be developed into contextualized learning materials based on the least mastered skills in the first quarter and second quarter examinations of school year 2022-2023. In addition, the two groups of respondents evaluated the material as Very Satisfactory in terms of content, format, presentation and organization and accuracy and up-to-datedness of information. Moreover, there was no significant difference in the evaluation of the two groups of respondents on the developed contextualized learning materials. Comments and suggestions were offered by the two group of respondents to further improve the developed contextualized learning materials in Mathematics 7.

Keywords: *development, evaluation, contextualized, mathematics*

Introduction

The K-12 curriculum frameworks highlights the fundamental importance of context in shaping the curriculum, and consequently, the teaching-learning process, as reflected in the Enhanced Basic Education Act of 2013 (RA10533), The Department of Education shall adhere to the following standards and principles in developing the enhanced basic education curriculum: (h) The curriculum shall be flexible enough to enable and allow schools to localize, indigenize and enhance the same based on their respective educational and social contexts. The production and development of locally produced teaching materials shall be encouraged, and approval of these materials shall devolve to the regional and division education units.

Mathematics has so many practical applications, hence, is widely considered to be extremely important in daily life. It is impossible to envision a world without mathematics. But many students around the world also believe that math is the hardest subject to learn. Students struggle to accept the issue at hand.

To effectively teach mathematics, one must have a clear knowledge of the material that pupils must acquire and provide them with the assistance they need to do so. To be effective, teachers must comprehend and care about their students, as well as possess the ability to select and apply a wide range of pedagogical techniques and instructional resources. One of the innovative approaches that shows promise for enhancing instruction and providing students with meaningful learning experiences across all subject areas is the implementation of diverse teaching styles.

However, the result of the Programme for International Student Assessment (PISA) where the Philippines first joined in 2018, adds to the fact that it must be given close attention by authorities especially educators. A Filipino's average score in Mathematics is 353 points. The score is much more that the OECD's (Organization for Economic Cooperation and Development) 489-point average and is regarded as below Level 1 Proficiency.

According to the Programme for International Student Assessment, Filipino students were second lowest in both mathematics and scientific literacy in 2018 out of 79 countries, and last in reading comprehension. According to the 2019 Trends in International Mathematics and Science Study, every lesson in the mathematics learning process requires a great deal of practice before the students can master the concepts.

In the Philippine educational system nowadays, learning resources are considered invaluable instruments for raising student performance. Therefore, Dahar (2020) highlighted that there is a considerable correlation between secondary students' academic performance and their utilization of proper learning resources. According to Barlis (2019), educational resources are crucial in raising students' math proficiency. The needed learning materials could not be made available for use of the learners for them to become, hence, results to their low academic performance in Mathematics.

With all the gathered information, the researcher of the study, a Mathematics teacher, was inspired to develop contextualized learning materials that would enable learners to understand the concept and lessons in Mathematics in a motivated way and view the subject as an enjoyable one. These contextualized learning materials in Mathematics 7 could serve as supplementary learning materials or remediation tools for use of both the teachers and students.

Research Questions

This study aimed to develop and evaluate contextualized learning materials in Mathematics for grade 7 students of Dela Paz High School in the Division of Pasig City during the school year 2023-2024. More specifically, the study sought to answer the following

questions:

1. What topics in Mathematics 7 may be developed into contextualized learning materials based on the top five least mastered skills in the first quarter and second quarter examinations of school year 2022-2023?
2. What is the evaluation of the selected Mathematics teachers and expert respondents on the developed contextualized learning materials in Mathematics 7 in terms of the following criteria?
 - 2.1. Content
 - 2.2. Format
 - 2.3. Presentation and Organization
 - 2.4. Accuracy and Up-to-datedness of Information
3. Is there a significant difference between the evaluations of the two groups of respondents on the developed contextualized learning materials in Mathematics 7 in terms of the aforementioned criteria?
4. What are the comments and suggestions of the two groups of respondents to further improve the developed contextualized learning materials in Mathematics 7?

Literature Review

According to Perm (2018), contextualized learning in formal education might signify different things depending on the context in which it takes place. Contextualized teaching and learning aim to support constructivism, which emphasizes how people interpret their surroundings.

In addition, the role of contextualization is to incorporate learning process that helps students to make sense of information by connecting what they are learning to world situations. It also enables students to receive feedback on their ability to relate and apply their learning to real world situations, Glahn and Gruber (2020).

Relatively, curriculum contextualization, according to Perin (2018), as quoted in Leite (2013), is a means of bringing teaching and learning closer to the realities of students. It is necessary to address the subject matter and plan the activities that will be conducted in the classroom. Curriculum contextualization makes it easier for students to connect theory and practice by assisting them in making connections between educational objectives and their prior knowledge and life experiences.

Moreso, it is crucial to keep in mind that the abilities teachers wish to instill in their students like problem-solving, critical thinking, and even dribbling a ball do not exist in a vacuum. By employing intentional contexts and learning exercises, educators can demonstrate to their students the uses for these abilities as well as the reasons behind them (Borja, 2023).

Consequently, one of the most important strategies for getting students involved in the teaching-learning process is contextualization, which allows them to relate lessons to their own situations. By connecting the students' context to the mathematical material delivered in the classroom, the lesson becomes meaningful and applicable to the students' daily life (Reyes, Ingreso, Hilario, F. F., et al., 2019).

Meanwhile, Ogates, Canoy, Moleno et. al. (2023) conducted a study on the use of contextualized learning activity sheets in modular distance learning that significantly impacted students' achievement in Mathematics. Based on the findings, contextualized learning activity sheets should be used to supplement or remediate instruction for struggling students to monitor their development and improve their academic performance. As a result, these could be used to boost and improve students' academic performance. Students' achievement in mathematics has improved because of using contextualized learning activity sheets in the teaching and learning process across all subjects and grading periods.

Aguilando and Domingo (2021), in response to a directive to contextualize the basic education curriculum, produced and tested contextualized learning materials (CLMs) in the subject of mathematics for grade 7. The experts reached a consensus that the goals, content, structure, resources and materials, effectiveness, and contextualization elements of the generated CLMs were all very legitimate. As a result, the created CLMs were reliable and useful, and they could be used as models for creating contextualized math resources. The CLMs created for this study were reliable and useful for teaching math to seventh graders.

Furthermore, Cubillas (2020) found that the Contextualized Learning Material (CLM) that was generated was deemed reasonable and suitable by content experts for grade 7 students. This material helps the students master the least-learned skill for the first grading quarterly test. Additionally, the experts thought that the created CLM would make good teacher support materials for grade 7, as they are simple to administer and grade.

Methodology

Research Design

This study utilized the descriptive-survey method of research in order to achieve its main objective. This has been defined by several authors in their own ways. As widely accepted, according to Calderon and Gonzales (2004) as cited by Assuncion (2012) a descriptive survey is a fast-finding studies with sufficient and accurate interpretation. It is usually used to collect the different data about the people interpretation, attitude, opinions, practices and perceptions. It involves some types of comparison or contrast and many attempts to

discuss cause and effect relationship that existed as regards non-manipulated variables.

Respondents

The sources of the data in this research were the schools in Pasig City. The data were obtained from 30 mathematics teachers and ten experts from selected public secondary schools in Pasig City. The respondents were chosen through purposive sampling.

Instrument

The following are the research instruments that were used by the researcher in this study: In the conduct of the study, the researcher used the Grade 7 Mathematics K to 12 curriculum guide for junior high school to identify the topics that could be developed into contextualized learning materials, the results of the first and second quarter examination for school year 2022-2023, and a checklist questionnaire for the evaluation of the developed contextualized learning materials in Mathematics 7.

In addition, the result of the first and second quarter examinations in Mathematics 7 of Dela Paz High School in School Year 2022-2023 was used to determine the least mastered that could be into developed as a contextualized learning material.

Procedure

In the first phase of this study, permission was sought from the superintendent of Pasig City, and from the principal of the school where the respondents are teaching. The same permission was asked from all the teachers concerned. Before the conduct of the data gathering procedure, secure a copy of the research services agreement, the consent to participate in research study from the RDO (Research and Development Office) MPC, conforme letter from the graduate school, and a validated questionnaire signed and validated by the validators. Then submit to RDO the copy of the requirements with signatories.

The second phase was the development of contextualized learning materials in Mathematics 7. Based on the K to 12 Curriculum Guide for Junior High School program, there are five (five) least mastered skills in the first and second quarter in Mathematics 7 for the School Year 2022-2023. The researcher developed and submitted the developed contextualized learning materials to the adviser for revisions and suggestions to further improve the material. After the developed contextualized learning materials were reproduced, the researcher developed a questionnaire-checklist instrument adopted from the Department of Education LRDMMS Guidelines, Evaluation Template 6.4 Refer to Guidelines and Process for LRDMMS Assessment and Evaluation V1.0 (1.1 Rating Sheet for PRINT Resources) for the evaluation of each part of the contextualized learning materials. The questionnaire was revised by the researcher, checked by the adviser and validated by some of the experts of this study.

The last phase, after the approval was granted, the researcher's administration and retrieval of the survey questionnaire were done online through google form link to ensure that all the items were answered honestly and completely by the respondents. The respondents were given instructions on the manner of answering the survey. It was administered to 30 Mathematics Teachers (Teacher I to Teacher III) in selected public secondary schools in Pasig City. The experts were composed of ten, Master Teachers, Mathematics Coordinator or Head Teacher from selected secondary schools in Pasig City. Comments and suggestions on the developed contextualized learning material were also gathered to add to the assessment, improvement and development of the learning materials. After the retrieval of the results, the data were tailed and tabulated for orderly presentation and analysis.

Ethical Considerations

The researcher observed the necessary ethics in the conduct of his study. She first informed the respondents regarding the involvement in the study and got their consent. She also explained to the respondents that their participation was voluntary and their responses to the questionnaire would be treated with the utmost confidentiality.

Results and Discussion

This portion presents the results and discussion based on the gathered data.

Learning Competencies Developed into Contextualized Learning Materials

The top five least mastered skills in the first quarter of school year 2022-2023 are as follows; 1) Solving Problems on Sets Using Venn Diagram, as top 1 least mastered skills with a percentage of 82%; 2) Rational Numbers: a) Addition and Subtraction Fractions; b) Multiplication and Division of Fractions, as top 2 & 3 least mastered skills with a percentage of 81 and 82%, respectively; 3) Rational and Irrational Numbers: a) Estimating the Square Root of a Number; top 4 and top 5 least mastered skills with a percentage of 77% and 81 % respectively. The top 5 least mastered skills in the second quarter of school year 2022-2023 are as follows; 4) Operations of Polynomials: a) Laws of Exponent; b) Multiplies; and c) Divides Polynomials, top 5 least mastered skills with a percentage of 72%; and 5) Uses Models and Algebraic Methods to find the: (a) Product of Two Binomials; (b) Square of a Binomial; (c) Cube of a Binomial; (d) Product of a Binomial and a Trinomial, top 1-4 with a percentage of 75%, 73, 77%, respectively.

It is evident that the aforementioned competencies were the top five least mastered skills in the first and second quarter of school year 2022-2023 and found most difficult by the students as shown in each percentage. The study was supported by the study of Biason (2022) which revealed that the least mastered skills of the learners from District of Lemery, Iloilo were based on the learning

competencies of the students with the percentage of 68% to 100% based on the wrong answers of the learners.

Evaluation of the Mathematics Teachers and Expert Respondents on the Developed Contextualized Learning Materials in Mathematics 7

Table 1. Respondents' Evaluations on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Content

	Indicators	Respondents			
		Teachers		Experts	
		WM	VI	WM	VI
1.	Content is suitable to the student's level of development.	3.83	VS	3.70	VS
2.	Materials contributes to the achievement of specific objectives of the subject area and grade/year level for which it is intended.	3.87	VS	3.70	VS
3.	Material provides for the development of higher cognitive skills such as critical thinking, creativity, learning y doing, inquiry, problem solving, etc.	3.73	VS	3.50	VS
4.	Materials is free of ideological, cultural religious, racial, and gender bases and prejudices.	3.73	VS	3.50	VS
5.	Materials enhances the development of desires values and traits such; 1) desire to learn new things; 2) critical and creative thinking;3) productive work; 4) helpfulness/teamwork/cooperation.	3.73	VS	3.60	VS
6.	Material has the potential to arouse interest of target reader.	3.80	VS	3.70	VS
7.	Adequate warning/cautionary notes are provided in topics and activities where safety and health are of concern.	3.77	VS	3.50	VS
Average Weighted Mean		3.78	VS	3.60	VS
Standard Deviation		0.42		0.51	

In the table, the teachers and expert evaluated the content of the developed contextualized learning materials in Mathematics 7 as Very Satisfactory with an average mean of 3.78 and 3.60 and standard deviation of 0.42 and 0.51, respectively. It can be concluded that the contextualized learning materials in Mathematics 7 have contents that were suitable to the student's level of development, and that the material contributed to the achievement of specific objectives for grade 7 students. The material content provided the development of higher cognitive skills, free of ideological, cultural, religious, racial, and gender bases and prejudices. The study of Diago and Dillo (2022) supported the current study, stated that the contextualizing Mathematics adheres to the twin goal of mathematics, problem solving and critical thinking. Learning content is used in elementary and secondary, mathematics teachers as a way to engage students, deepen content learning, and promote transfer of skill and student motivation with their own phase and environment.

Table 2. Respondents' Evaluations on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Format

	Indicators	Respondents			
		Teachers		Experts	
		WM	VI	WM	VI
1.	Prints				
	1.1 Font and size of letters is appropriate to the intended user.	3.80	VS	3.80	VS
	1.2. Spaces between letters and works facilitate reading.	3.73	VS	3.80	VS
	1.3. Printing is good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).	3.70	VS	3.80	VS
2.	Illustrations				
	2.1 Simple and easy recognizable.	3.87	VS	3.70	VS
	2.2 Clarify and supplement the text.	3.83	VS	3.80	VS
	2.3 Properly labelled or captioned (if applicable)	3.77	VS	3.80	VS
	2.4 Realistic/appropriate colors.	3.73	VS	3.80	VS
	2.5 Attractive and appealing.	3.83	VS	3.90	VS
	2.6 Culturally relevant.	3.70	VS	3.60	VS
3.	Design and Layout				
	3.1 Attractive and easily recognizable.	3.83	VS	3.80	VS
	3.2 Simple (i.e., does not distract the attention of the reader).	3.77	VS	3.70	VS
	3.3 Adequate illustration in relation to text.	3.83	VS	3.80	VS
	3.4 Harmonious blending of elements (e.g., illustrations and text).	3.83	VS	3.70	VS
4.	Paper and Binding				
	4.1 Paper used contributes to easy reading.	3.70	VS	3.60	VS
	4.2 Durable binding to withstand frequent use.	3.70	VS	3.60	VS
5.	Size and Weight of Resource				
	5.1 Easy to handle.	3.77	VS	3.50	VS
	5.2 Relatively light.	3.77	VS	3.50	VS
Average Weighted Mean		3.78	VS	3.72	VS
Standard Deviation		0.42		0.46	

It can be seen in the table that both teachers and experts rated Very Satisfactory with the format of the contextualized learning materials in Mathematics 7 with average weighted means of 3.78 and 3.72 and standard deviations of 0.42 and 0.46, respectively. As to the format of the contextualized learning materials, the data show that the prints on the modules, the layout and design, the paper and binding, and the weight and size of the resources all helped to create visual representations that made the concepts easy to grasp.

The result of the study of Madrazo & Dio (2020) was similar to the present study in terms of the format of the contextualized learning materials.

Table 3. Respondents' Evaluations on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Presentation and Organization

Indicators	Respondents					
	Teachers		Experts			
	WM	VI	WM	VI		
1. Presentation is engaging, interesting, and understandable.	3.77	VS	3.70	VS		
2. There is logical and smooth flow of ideas.	3.73	VS	3.70	VS		
3. Vocabulary level is adapted to target reader's likely experience and level of understanding.	3.80	VS	3.70	VS		
4. Length of sentences is suited to the comprehension level of the target reader.	3.83	VS	3.80	VS		
	Average Weighted Mean		3.78	VS	3.73	VS
	Standard Deviation		0.42		0.47	

It can be observed in the table that the presentation and organization of the contextualized learning materials in Mathematics 7 was evaluated as Very Satisfactory by the teacher and expert respondents with average weighted means of 3.78 and 3.73 and standard deviations of 0.42 and 0.47, respectively. This indicates that the presentation of learning materials was comprehensible, captivating, and fascinating. The thoughts were coherent and flowed well. The sentences' lengths corresponded to the readers' comprehension level of grade 7 students and the vocabulary level were adapted by students experience and level of understanding.

Diago and Dillo (2022) cited the study of Leite (2013) that supported the present study, wherein one strategy to bring teaching and learning closer to students' experiences is through curricular contextualization. It is a must when discussing how to present and arrange the tasks that need to be completed in the classroom.

Table 4. Respondents' Evaluations on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Accuracy and Up-to-Datedness of Information

Indicators	Respondents					
	Teachers		Experts			
	WM	VI	WM	VI		
1. No conceptual errors.	3.80	VS	3.70	VS		
2. No factual errors.	3.67	VS	3.60	VS		
3. No grammatical errors.	3.70	VS	3.70	VS		
4. No computational errors.	3.73	VS	3.70	VS		
5. No obsolete information.	3.77	VS	3.70	VS		
6. No typographical and other minor errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc.).	3.70	VS	3.50	VS		
	Average Weighted Mean		3.73	VS	3.70	VS
	Standard Deviation		0.45		0.50	

It can be observed in the table that all the indicators pertaining to the accuracy and up-to-datedness of information of the contextualized learning materials in Mathematics 7 were rated Very Satisfactory by the two groups of respondents as well as the average weighted means of 3.73 and 3.70 with the standard deviation of 0.38 and 0.37, respectively. The findings suggests that the developed learning materials were accurate, and the information was of up-to-date. The evaluators identified minor mistakes such factual, grammatical, computational, and conceptual flaws as well as the use of out-of-date material.

The study of Madrazo & Dio (2020) stated that the aforementioned identified errors in terms of accuracy and up-to-datedness of information of the contextualized learning materials in Mathematics 7 could still be utilized to guide the learner's attention while keeping the teacher informed of the topic of discussion, to support new learning, and to improve memory for the creation of accurate responses to support active learning.

Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Contextualized Learning Materials in Mathematics 7

The difference in the evaluation of the two groups of respondents was not significant. It did not affect the result of the evaluation. This means that the teachers' and experts' respondents agreed on the content of the developed contextualized learning materials.

The result of the study corroborated with the findings of Aguilando (2021). The experts agreed that the developed CLMs could be used in terms of objectives, content, organization, materials and resources, effectivity, and features of contextualization.

Table 5. *Test of Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Content*

Respondents	WM	s	Computed t value	Critical value ($\alpha=5\%,df=38$)	Decision	Interpretation
Teachers	3.78	0.42			Fail to Reject H ₀	Not Significant
Experts	3.60	0.51	0.18	2.02		

Table 6. *Test of Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Format*

Respondents	WM	s	Computed t value	Critical value ($\alpha=5\%,df=38$)	Decision	Interpretation
Teachers	3.78	0.42			Fail to Reject H ₀	Not Significant
Experts	3.60	0.48	0.61	2.02		

The data show that the teachers' and experts' respondents agreed on the format of the developed contextualized learning materials based on their evaluation.

Related study from Tandog, Villegas, Badilles et. al., (2023), stated that the texts and other resources teachers use to help students develop their literacy skills are referred to as classroom reading materials.

Table 7. *Test of Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Presentation and Organization*

Respondents	WM	s	Computed t value	Critical value ($\alpha=5\%,df=38$)	Decision	Interpretation
Teachers	3.78	0.42			Fail to Reject H ₀	Not Significant
Experts	3.60	0.47	0.67	2.02		

It shows that there was no significant difference between the evaluations of the two groups of respondents on the developed contextualized learning materials in Mathematics. This implies that the two groups of respondents agreed that the presentation and organization of developed learning materials had a very satisfactory rating.

The result of the study is similar with the findings of Aguilando (2021), wherein the experts agreed that the developed CLMs were very satisfactory in terms of objectives, content, organization, materials and resources, effectivity, and features of contextualization. In the present study the evaluator on was very satisfactory which is equivalent to the rating scale of both studies.

Table 8. *Test of Significant Difference between the Evaluations of the Two Groups of Respondents on the Developed Contextualized Learning Materials in Mathematics 7 in terms of Accuracy and Up-to-Datedness*

Respondents	WM	s	Computed t value	Critical value ($\alpha=5\%,df=38$)	Decision	Interpretation
Teachers	3.78	0.42			Fail to Reject H ₀	Not Significant
Experts	3.60	0.51	0.18	2.02		

With regard to the accuracy and up-to-datedness of information on the developed Contextualized Learning Materials in Mathematics 7 based on the evaluations of the teachers' and experts' respondents on the learning material the rating were very satisfactory. It was therefore recommended to adopt the developed materials.

Similar study from Cubillas (2020) stated that it is specifically designed, produced, and constructed to teach remediation for students who perform poorly in the topic, based on the least mastered skills of the students.

Comments and Suggestions Offered by the Respondents for the Improvement of the Developed Contextualized Learning Materials in Mathematics 7

The following were the comments and suggestions of the two groups of respondents to enhance the developed contextualized learning materials in Mathematics 7.

Comments

On the content of the learning materials, these were the comments from the five evaluators: a) It is easy to understand since the examples are simple and connected to each topic; b) There's enough examples given; c) It's better to write the quotient rule on a proper fraction form; d) The material is good and interesting; and e) Include word problems leading to higher critical thinking skills.

As to the material's format, the comments of the evaluators were as follows: a) Materials should be seen by the evaluator in a printed manuscript so that it can be evaluated objectively and properly; and b) Use minimal icons to cover. Make exponents a little more visible. If possible, avoid using parenthesis on a single exponent.

With regard to the presentation and organization, the following comments from the two evaluators were as follows: a) The material can be easily navigated and understood; and b) it's beneficial for both teachers and students.

As to learning material's accuracy and up-to-datedness of information, the evaluator's comment was: 1) Give ample time to validate the material for a long period of time to check the accuracy and correctness of the key to correction and the material itself.

Suggestions

The suggestions of the four evaluators with regard to the material's content were as follows: a) It's better if you elaborate (expanded form) how did you get the answer in all Laws of Exponents that you used in the given; b) Give more examples; c) Don't forget to write the direction for each activity or examples; and d) You may discuss also what if the exponent of the numerator is smaller than the exponent of the denominator. As you write it in expanded form why not give also the simplified form.

As to the material's format, the evaluators' comment is to improve the cover page of learning materials so that some of the schools can adopt the learning materials in their respective schools for use of their students and teachers.

With regard to the presentation and organization of the learning material, the suggestions are: print the material: to check the content carefully for errors and to avoid confusion about the topic being discussed. It is good to add more color or interesting design, it is simple but can catch the attention of the grade 7 students.

On the accuracy and up-to-datedness of information, the researcher needs to include word problems with clear illustrations with proper labels and captions.

Conclusions

Based on the findings of this study, the following are the conclusions drawn from the results of the study. The evaluations of the two groups of respondents on the developed Contextualized Learning Materials in Mathematics 7 did not differ in terms of content, format, presentation and organization, and accuracy and up-to-datedness of information. The developed Contextualized Learning Materials in Mathematics 7 was given high approval of utilization to improve the academic performance of grade 7 students in Dela Paz High School as a result of the teachers and experts' evaluation, provided that the corrections and revisions suggested would be considered.

References

- Biason, J. (2022). Assessment of Learning Competencies in Mathematics: Basis for Contextualized Instructional Material Development, *Psychology and Education: A Multidisciplinary Journal*, Volume 4, Issue 7, pp. 717-726.
- Borja & Acorda (2023). Enhancing Mathematical Skills on Rational Algebraic Expressions through Contextualized Activity Sheets cum Video.
- Cubillas, T. (2020). Development and Validation of Strategic Intervention Materials (SIMs) in Teaching Elementary English 4: A Content Validation. Butuan Central Elementary School. Vol. 08, Issue, 06, pp.21252-21259.
- Diago, O & Dillo L. (2022). The Practices of Filipino Teachers in Contextualizing Mathematics. *International Journal of Science and Research (IJSR)*. College of Education, Culture and Arts St. Paul University Surigao, Philippines. Vol. 11, Issue 7, pages 318-325.
- Glahn C. & Gruber M. (2020). Designing for Context-Aware and Contextualized Learning. France: UNESCO Digital Library.
- Madrazo, A. & Dio, R. (2020). Contextualized Learning Modules in Bridging Students' Learning Gaps in Calculus With Analytic Geometry Through Independent Learning. Bicol University Graduate School, Legazpi City, Albay and Sorsogon State College, Sorsogon City, Sorsogon, Philippines. Vol. 11, No. 3, pp. 457-476
- OECD (2023), "Executive Summary", in PISA 2022 Results (Volume I): The State of Learning and Equity in Education, OECD Publishing, Paris, Retrieved on April 26, 2024, retrieved from <https://doi.org/10.1787/daff08b1-en>.
- Ogates, R., Canoy, J., Moleño, R. et. al. (2023). Contextualized Teaching on Student's Performance in Mathematics during Post-pandemic (COVID-19). A Master's Thesis. Sapa Anding NHS - RM Extension, Department of Education, Philippines.
- Perm, D (2018). Facilitating student learning through contextualization. Assessment of evidence series. Community College Research Center, Teachers College, Columbia University.
- Perin, D. (2017). Facilitating Student Learning Through Contextualization. Community College Research Center. Teachers College, Columbia University.
- Reyes, I, Ingreso, O, Hilario, F. (2019). Conception and Application of Contextualization in Mathematics Education. *International*



Journal of Educational Studies in Mathematics, Vol. 6, Issue No. 1, pp. 1-18.

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