

Effectiveness of Remedial, Reinforcement and Enrichment (RRE) Activities in Improving the Performance of Grade 5 and 6 Pupils in Math

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Abstract — Learners are the core of the educational process, which entails day-to-day activities and performances. Teachers need to make extra efforts to supplement their teachings from time to time and Jimenez (2020) identified ten factors that motivate teachers to develop supplementary learning materials. Most of these students attend their everyday classes to pass their assessments that will assure them that learning is essentially understood. Remediation activities as one guarantee educational assistance to those children who are low performers and absentees. This ensures better academic performance for all the children who are at risk of dropping out and failing. The utilization of remedial, reinforcement and enrichment (RRE) activities after the delivery of every lesson was emphasized in this study hoping that this will address the present scenario in the education system of today. A quasi-experimental research design employing pre-test and post-test based on the researcher-made test in Math using the 4th quarter Most Essential Learning Competencies (MELCs) and crafting and using the lesson plans highlighting the remedial, reinforcement and enrichment (RRE) activities and learning materials which was used by teacher and pupils in the conduct of RRE was used. Simple percentage and t-test of mean difference were the statistical tools used to analyze and interpret the data presented. The study revealed a significant difference in the performances of the Grades 5 & 6 pupils before and after the implementation of remedial, reinforcement and enrichment (RRE) activities in Math. The learning materials prepared by the researcher used in the duration of the intervention were learning activity sheets with parallel test questions, video lessons, practice exercises using computer-assisted and differentiated activity cards given to each group of pupils based on the result of the pre-test contributed much to the attainment of an improved performance in Math. Thus, remedial, reinforcement and enrichment (RRE) activities when provided and conducted to the pupils are effective in improving their performance in Math.

Keywords — Effectiveness, Teacher-Made Small Books, Comprehension Skills, Grade 3 Pupils



I. Introduction

Each pupil is different in terms of learning ability, academic standards, classroom learning and academic performance, and each has his own learning. They differ in intellectual abilities, dispositions, and interests. Some of them learn readily and usually understand what the teachers taught, while others are not quick to catch on and need review and re-teaching. If some pupils have trouble in understanding the concepts, the teacher can diagnose the trouble and provide appropriate remedial activities.

In teaching Math, teachers give formative assessment after the lesson. The purpose of evaluating the pupils is to diagnose the mastery of the lesson presented. There are cases that pupils cannot reach the required mastery level, so they were given remedial instructions or teacher reteach the lesson providing different activities based on their level. Aside from that, if pupils get the average rating, the teacher also gives them reinforcement activities for them to be able to master the skills. On the other hand, when pupils have mastered the skills, the teacher provides them with enrichment activities. These differentiated activities must be given every day after the lesson so that mastery of the lesson will be attained. Remedial, reinforcement and enrichment (RRE) activities is still part of the lesson but some of the teachers utilize the time in the discussion of the lesson. This is why RRE is left unattended by the teachers.

In teaching multigrade classes, mastery of the skills taught in a day is sometime not attained. Most of the time only a few pupils are able to get the required number of correct items the reason that most of them failed. On this premise, the teacher usually provided additional activities to the pupils without looking into the groupings of intellectual abilities of the learners based on the result of the assessment. Tendency, the problems regularly occur.

As the face-to-face classes progressively implemented, teachers must do and adopt interventions to address low performance in Math. During the 2nd quarter of this school year, the teacher adopted the utilization of activities provided during RRE sessions. It was found out that some of the pupils' performance had improved. Thus, the researcher who is at the same the Math teacher at the school decided to conduct this study to evaluate the effectiveness of implementing remedial, reinforcement and enrichment instruction to the pupils through the provision of differentiated activities.

Remedial classes have been found to deliver many advantages, by providing pupils with the basic skills to advance to a higher academic level and by reinforcing these skills. Furthermore, remedial classes provide help to students with learning difficulties to rewire brain connections, and aid those with communication skill problems to be more academically proficient. They have also been found to help students with behavioral issues which emerge from frustrations resulting from an inability to perform academically in the classroom by reducing the feeling of inadequacy that leads to behavior or motivation issues.



Because of the conditions that our learners face as they miss opportunities to fully acquire the learning competencies, this study was conducted to help every learner have a chance to master different competencies of their subject. The researchers believe that the use of these remediation, reinforcement and enrichment activities will help increase the academic performance of pupils in Math. This will help each pupil to master the competencies required in the subject and at the same time, shall be able to increase the school's overall rating. Thus, it is in this premise that the researcher conducted this study to evaluate the effectiveness of remedial, reinforcement and enrichment (RRE) activities in improving the performance of the Grades 5 & 6 pupils in Math. A proposed improvement plan will be formulated based on the findings of the study.

It is in the rationale that the researcher who is currently a grades 5 & 6 teacher in the above mentioned local, would like to delve worthy research undertaking that will benefit herself, the school she is currently teaching and that of her Graduate Program she is enrolled at.

This study evaluates the effectiveness of remedial, reinforcement and enrichment (RRE) activities in improving the performance of Grades 5 and 6 pupils in Math in Consolacion Elementary School, Isabel I District, Leyte Division for School Year 2022-2023. The findings of the study were the basis for the proposed improvement plan.

Specifically, this study sought to answer the following questions:

- 1. What is the performance of the Grades 5 & 6 pupils before the implementation of remedial, reinforcement and enrichment (RRE) activities in Math?
- 2. What is the performance of the Grades 5 & 6 pupils after the implementation of remedial, reinforcement and enrichment (RRE) activities in Math?
- 3. Is there a significant difference in the performances of the Grades 5 & 6 pupils before and after the implementation of remedial, reinforcement and enrichment (RRE) activities in Math?
- 4. What improvement plan can be proposed based on the findings of this study?

II. Methodology

Design. This study employed the quasi-experimental research design utilizing the pre-test and post-test to evaluate the effectiveness of remedial, reinforcement and enrichment (RRE) activities in improving the performance of Grades 5 and 6 pupils in Math for School Year 2022-2023. in Consolacion Elementary School, Isabel I District, Leyte Division is the main locale of the study. The 17 Grades 5 and 6 pupils enrolled in the said locale for School Year 2022-2023 are the main respondents of the study. A researcher-made test in Math using the 4th quarter Most Essential Learning Competencies (MELCs). This is a 30-item multiple choice question of which the pupils will show their solution in the space provided. This was conducted before and after the utilization

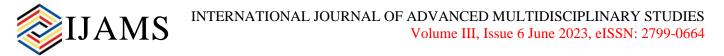


of remedial, reinforcement and enrichment (RRE) activities in Math. Moreover, the researcher will prepare lesson plans highlighting the remedial, reinforcement and enrichment (RRE) activities and learning materials which will be used by the teacher and pupils in the conduct of RRE. The learning materials and activities will focus on the 4th quarter Most Essential Learning Competencies (MELCs) for the grade. The learning materials prepared by the researcher used in the duration of the intervention were learning activity sheets with parallel test questions, video lessons, practice exercises using computer-assisted and differentiated activity cards given to each group of pupils based on the result of the pre-test. A matrix of activities was crafted to guide the teacher-researcher the flow of her study. This research focused on evaluating the effectiveness of remedial, reinforcement and enrichment (RRE) activities in improving the performance of Grades 5 and 6 pupils through the pre-test and post-test and its significant difference. A Proposed Improvement Plan based on the findings of the study is the output.

Sampling. There are 17 Grades 5 and 6 pupils involved in this study. The research instruments were administered face-to-face with consent from the Local IATF and strictly following the prescribed Health Protocol during the face-to-face classes.

Research Procedure. The researcher prepared the research design and tools utilized in the study. Approval and recommendation from the Panel of Examiner of the Graduate Studies was sought. A letter request to conduct this study was forwarded to the Office of the Schools Division Superintendent. Upon approval, permission from the District Supervisor and School Head was secured before the actual gathering of data. Orientation of the participants and administration of the pre-test was done face-to-face after the approval of the permit from the parents of the respondents. After accomplishing the pre-test, intervention was given within four weeks. The utilization of remedial, reinforcement and enrichment (RRE) activities in Math which are learning activity sheets with parallel test questions, video lessons, practice exercises using computer-assisted and differentiated activity cards were emphasized in the study. After the four-week intervention, the post-test was administered. Results of the tests were collected. Data were tallied and submitted for statistical treatment. Analysis and Interpretation of Data. Making of Proposed Improvement Plan followed.

Ethical Issues. The researcher properly secured the permission to conduct the study from the authorities through written communication. In the formulation of the intervention materials that was used in the study, the use of offensive, discriminatory or other unacceptable language was avoided. The respondents' names and other personal data were not included in this study to protect their privacy. Participation of the respondents was also voluntary. Orientation was conducted for the respondents with their parents. In the orientation, issues and concerns were addressed and consent to be included in the study were signed. The researcher-maintained objectivity in analyzing and discussing the results. All authors whose works were mentioned in this study were properly quoted and were acknowledged in the reference.



Treatment of Data. Simple Percentage was employed to evaluate the performances in Math of the Grades 5 & 6 pupils before and after the utilization of remedial, reinforcement and enrichment (RRE) activities in Math. **t-Test of Mean Difference** was used to determine the significant difference in the performances of the Grades 5 & 6 pupils before and after the utilization of remedial, reinforcement and enrichment (RRE) activities in Math.

III. Results and Discussion

Seene Dongo	Description	PRETEST		
Score Range	Description	Frequency	%	
25-30	Excellent	4	24	
19-24	Very Good	6	35	
13-18	Good	7	41	
7-12	Fair	0	0	
1-6	Poor	0	0	
Total		17	100	
Weighte	Weighted Mean		Very Good	

Table 1Performance of Grades 5 and 6 in Math Before the Intervention

Table 1 presents the performance of the Grades 5 & 6 pupils before the implementation of remedial, reinforcement and enrichment (RRE) activities in Math. It was revealed on the table that among the 17 Grades 5 and 6 pupils, while 4 or 24% got a score of 25-30 which is interpreted as excellent, 6 or 35% got a score of 19-24, and there are 7 or 41% got a score of 13-18 which is good. The performance of the Grades 5 & 6 pupils before the implementation of remedial, reinforcement and enrichment (RRE) activities in Math got a weighted mean of 20.88 which is interpreted as very good. This means that even before the utilization of remedial reading and enrichment activities, the Grades 5 and 6 pupils already able to achieve a very good performance because of the background knowledge of the pupils regarding the concepts convey in the test. This implies that they acquire very good performance because the test was conducted in the 3rd quarter and the pre-requisite skills to the competency in the present quarter were already mastered. Yet this data do not explain the willingness and need of the pupils for enhancement and reinforcement activities because not all pupils are able to master the skills. As cited by Ancheta (2008), for effective learning to take place, learners should be provided with varied activities. It is apparent that the teacher's role is to be creative and resourceful to be able to tailor instructional materials and instructional activities to the needs and capacities of the learners. What the learners learn depends largely on the skill and ability of the teacher to prepare and use such materials to capture the learners' attention, spark their interest and develop skills. Honrejas (2000) pointed out that among the elements for quality learning for quality education are the learning materials, the



textbooks, and supplementary materials. Availability and adequacy of these materials spell adequate and guaranteed content knowledge and information for the learner.

Score Range	Decomintion	POST-TEST		
	Description	Frequency	%	
25-30	Excellent	15	88	
19-24	Very Good	2	12	
13-18	Good	0	0	
7-12	Fair	0	0	
1-6	Poor	0	0	
Total		17	100	
Weighted Mean		27.41	Excellent	

Table 2 Performance of Grades 5 and 6 in Math After the Intervention

Table 2 presents the performance of the Grades 5 & 6 pupils before the implementation of remedial, reinforcement and enrichment (RRE) activities in Math. It was revealed on the table that among the 17 Grades 5 and 6 pupils, while 15 or 88% got a score of 25-30 which is interpreted as excellent, and 2 or 12% got a score of 19-24 which is very good. The performance of the Grades 5 & 6 pupils before the implementation of remedial, reinforcement and enrichment (RRE) activities in Math got a weighted mean of 27.88 which is interpreted as excellent. This means that the performance of the Grades 5 and 6 pupils after the utilization of remedial reading and enrichment activities, reached the maximum level of performance. This implies that the remedial, reinforcement and enrichment activities provided to the pupils influenced much in the improvement of their performance. Balbalec (2009) believed that instructional materials are the main instruments to effective and meaningful learning. Without these, all educational standards and principles are far from being realized. Instructional materials should not only provide a new body of knowledge but also avenues to reinforce skills and master concepts in a certain discipline. Remedial, reinforcement and enrichment classes are types of teaching programs designed specifically for students with deficiencies in school subjects such as Science and Mathematics (Woods, 2015). They equip students with in-demand skills and address the outcomes of an education system. The approaches, pedagogies and activities related to remedial, reinforcement and enrichment classes are simple and do not require an excessive amount of preparation, however they are significant and suitable for the level of low achieving students (Ho, 2016). Furthermore, remedial, reinforcement and enrichment classes lead students to becoming more engaged in the learning process.



Table 3					
Test of Difference Between the Performances of Grades 5 and 6					
in Math Before and After the Intervention					

Aspects	Test	Scores	Computed T	Critical T	Decision	Interpretation
Grades 5 & 6 Pupils Experimental	Pre Post	20.88 27.41	1.328	0.736	Reject H _o	Significant

Table 3 presented the statistical bases and analysis of which degrees of freedom were composed of 17 from the number of participants. The level of significance is 5% or the rejection level while the t-critical value is 0.736 from t-distribution. Based on the data presented the tcomputed value is 1.328 which means null hypothesis is being rejected. Since the computed value is higher than the critical value it means that there is a significant difference in the performances of the Grades 5 & 6 pupils before and after the implementation of remedial, reinforcement and enrichment (RRE) activities in Math. The result of the pre-test which is 20.88 has increased in the post-test of 27.41, making the intervention an effective learning materials and activities to be utilized in the conduct of remedial, reinforcement and enrichment instructions. The learning materials prepared by the researcher used in the duration of the intervention were learning activity sheets with parallel test questions, video lessons, practice exercises using computer-assisted and differentiated activity cards given to each group of pupils based on the result of the pre-test contributed much to the attainment of an improved performance in Math. In that premise, the pupils are motivated to learn and eagerly do the activities because it is suited to their needs. Jarrar (2014) maintains that there was improvement in the motivation and achievement of fourth grade students because of the impact of remedial classes. Selvarajan and Vasanthagumar (2012) have found that remedial instruction improved the competencies of low achieving students. The results showed that remedial classes were effective in improving student performance and achievement in Mathematics. The researchers assert that remedial classes are one of the most satisfactory solutions to increasing student achievement and recommended it for ongoing development of teachers' skills in remedial teaching. As Capuyan et al. (2019) revealed, there is a positive relationship between the previous and the current grade levels' grades of pupils attending remediation lessons. In relation, Tseng et al. (2016) also mentioned that remedial interventions by teaching advisors had a great impact on students' improvement of final grades.



IV. Conclusion

The study revealed a significant difference in the performances of the Grades 5 & 6 pupils before and after the implementation of remedial, reinforcement and enrichment (RRE) activities in Math. The learning materials prepared by the researcher used in the duration of the intervention were learning activity sheets with parallel test questions, video lessons, practice exercises using computer-assisted and differentiated activity cards given to each group of pupils based on the result of the pre-test contributed much to the attainment of an improved performance in Math. Thus, remedial, reinforcement and enrichment (RRE) activities when provided and conducted to the pupils is effective in improving their performance in Math.

V. Recommendations

- 1. Utilize the proposed improvement plan formulated.
- 2. Implement the remedial, reinforcement and enrichment (RRE) instructions to help the Math performance of pupils be continually sustained.
- 3. The Department of Education may fully support the continuing professional development of students based on the principle of lifelong learning and DepEd's commitment to the development of teachers' potential for their success in the curriculum.
- 4. Conduct related free training and seminars to the elementary teachers to help empower and sustained their knowledge in teaching Math.
- 5. Teachers must extend extra time in teaching the struggling readers to improve the Math performance of the pupils.
- 6. Teachers must be knowledgeable in providing additional learning support materials to the pupils.
- 7. Teachers must attend training or LAC sessions on the proper conduct of remedial, reinforcement and enrichment (RRE) instructions.
- 8. School Heads must include remedial instructions in the class program of teachers.
- 9. Institutionalize the conduct of remedial, reinforcement and enrichment (RRE) instructions in the classroom regularly, and
- 10. Future researchers should replicate this study to include different locales and include different variables aside from the mentioned in this study.



ACKNOWLEDGMENT

With great indebtedness, I wish to express my sincere appreciation and gratefulness to several individuals who have contributed valuable things for the completion of my thesis.

First and foremost, Praises and Thanks to our Lord and Savior Jesus Christ, for His presence, provision, protection and preservation.

To Dr. Jasmine B. Misa, my thesis adviser, for the steadfast encouragements, reminders, and for the trust and confidence in my capabilities which provided me the motivation and zeal to pursue this endeavor.

To the members of my Thesis Committee and Panel Examiners headed by Dr. Bryant C. Acar, Chairman and Scribe of the Pre and Oral Examination panel, together with Dr. Annabelle A. Wenceslao and Dr. Elvin H. Wenceslao for the smooth sailing of things behind frails in the laborious toil of my study.

To the Dean of the Graduate Department of Western Leyte College, Dr. Sabina B. Con-ui, for your understanding and considerations in all my requests.

To my DepEd Leyte Division Family headed by Dr. Manuel P. Albano, for allowing me to conduct this study in our school.

To my Consolacion School family, headed by our eloquent and warm-hearted School Head, Mr. Temestocles I. Lacdaying Jr., the faculty and staff, parents and pupils for having been ainstrumentalin the realization of this endeavor.

To the unwavering support of my husband, Jo William L. Gecain and kids, William Gavril R. Gecain and Bella Sheillize R. Gecain for always believing in me that I am bound for great things.

To my loving mother, Elizabeth L. Rebadulla, for your unconditional love, prayers and support extended which inspire me to achieve my educational goal.

And to all the people who believed in me and continue to believe in me, who look up to me as an inspiration, Thank you so much. All of these are offered to all of you. To God be All the glory.



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AUTHOR'S PROFILE

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The author is Sheillamer Rebadulla - Gecain. She was born on August 13, 1992 at Tugatog, Valenzuela, Metro Manila. She was married for 5 years with Mr. Jo William L. Gecain and has two children. She's presently residing at Can-Isco, Marvel, Isabel, Leyte. She finished her elementary education at Cangag Elementary School, Brgy. Cangag, Isabel, Leyte in the year 2004-2005 and continue her quest for education and able to finish her secondary education at The Sister of Mary School – Girlstown, Talisay City, Cebu in the year 2008-2009. She enrolled and finished her Bachelor in Elementary Education at Visayas State University- Isabel, Isabel, Leyte . in the year 2012-2013. She took up Master of Arts in Education major in Elementary Education with complete academic requirements at Western Leyte College of Ormoc City, Inc.

After she graduated her bachelor's degree she was hired as a teacher in Promisedland Educational Academy, Torril, Palompon, Leyte for two years in the year 2013 and ended her contract on May 2015. In the year 2015 of July, she was hired in the DepEd and currently teaching Grade 5 and 6 pupils at Consolacion Elementary School. She also attended series of webinars/seminars and trainings to increase his professional growth as a teacher.