

Evaluation of the implementation of the 8-week learning recovery curriculum in numeracy of grade 3 learners of Legazpi city

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Abstract

This study sought to evaluate the pretest and posttest results in numeracy of Grade 3 learners of the Schools Division of Legazpi City and determine the effectiveness of the implementation of the 8-Week Learning Recovery Curriculum (LRC) as the numeracy intervention program based on the perception of the Grade 3 teachers. Given that all the Grade 3 learners underwent the intervention program and there was no random assignment of participants, this study qualifies as quasi-experimental research. Methodological triangulation through collection of pretest and post test results, survey, and interview with the Grade 3 teachers is used to establish the credibility of this study. Paired-samples *t* test is the statistical treatment used to analyze the pretest and posttest results. Descriptive statistics was used to interpret the results of the survey on the level of effectiveness of the intervention program and to capture the percentage of attendance of the learners and teachers. Thematic analysis was used to interpret the qualitative responses. This study found that there is a significant difference between the pretest and posttest results reflective of the *t*-value of -7.218, $p < 0.05$. This improvement can be attributed to the effective implementation of the numeracy intervention program as perceived by the Grade 3 teacher-respondents. The regular attendance of the learners and teachers also contributed to the effectiveness of the implementation. With this, numeracy intervention programs with similar features as that of the 8-Week LRC can be sustained to continuously address learning gaps until the learners become grade ready in a reasonable time.

Keywords: 8-Week Learning Recovery Curriculum; Numeracy intervention program; Quasi-experimental; Methodological triangulation; Paired-samples *t* test

1. Introduction

The Covid-19 pandemic outbreak in 2020 aggravated the academic backlogs of key stage 1 learners in Legazpi City. The academe took the brunt of the pandemic as it forged schools to close, delay classes and confine learners in their homes. The curriculum was redesigned for purposes of learning continuity. The Department of Education (DepEd) coped with the challenges through maximum use of technology in the various distance learning schemes. All efforts were exerted but results of numeracy assessment among 520 Grade 3 learners in Legazpi City conducted at the end of SY 2021-2022 confirmed learning losses as it revealed 82.12% were at the numeracy skills level described as 'Need Major Support'. This reiterated the need for remediation and intervention program in numeracy.

The first and important principle that specified the learning opportunities amidst the pandemic is the Basic Education Learning Continuity Plan (BE-LCP) that was initiated by DepEd Central Office. The Department developed the BE-LCP as a package of education interventions in response to the basic education challenges brought by Covid-19 (DO No. 012,

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s. 2020). Among the principles of the BE-LCP is to protect the health, safety and well-being of learners, teachers and personnel and prevent the further transmission of Covid-19, thus restricting the conduct of traditional face-to-face classes. The most important principle of the BE-LCP is to ensure learning continuity while protecting the health and safety of the learners. In response to this, the DepEd Region V contextualized its approach through the SMILE advocacy. The Serbisyon Mabilis Lalay sa Edukasyon (SMILE) concept evolved into Bicol's learning continuity framework: Ipadagos an Pagkanuod! SMILE, signifying Security and safety, Modalities of learning, In-service training, Learning resources and Engagement of stakeholders (Sadsad 2022). The two school years since the pandemic emerged were bridged by resilient and responsive efforts in capacitating teachers on how to facilitate distance learning schemes through synchronous online classes when feasible, asynchronous offline learning scheme, and modular learning. At the Schools Division Office of Legazpi City, the Learning Continuity Plan was coined as INSPIRE – Information and communication technology, Needs assessment, Safety and health protocols, Program and projects, Incessant improvements, Resource management, and Engagement of stakeholders. SDO Legazpi City maximized the use of various technology in the reproduction of modules, in preparing digital learning resources through radio-based, television-based and podcast lessons, and in facilitating synchronous and asynchronous classes. With all of these joined efforts, learning continued at the comforts of the learners' homes until face-to-face classes resumed in school year 2022-2023.

The opening of face-to-face classes indicated better signs of having conquered the pandemic and an opportunity to focus on the quality of teaching to address learning gaps or losses brought by the pandemic. Firmo (2022) reiterated that this school year is the right time to apply and implement the Learning Recovery Plan that is a brainchild of the DepEd RO V Director Gilbert T. Sadsad. Conceptualizing and implementing a Learning Recovery Plan (LRP) is the most sensible and responsive action that the Department can do for the learners for them to recover from the learning deficiencies in literacy and numeracy that were exacerbated by the Covid-19 pandemic outbreak. The R5 Learning Recovery Plan: RAISE – Recovering for Academic achievement by Improving instruction thru Sustainable Evidence-based learning programs was formed. The R5's LRP focused on strengthening the literacy and numeracy skills of early grade or key stage 1 learners that include Grades 1, 2 and 3. The implementation of the plan is for three school years, beginning this SY 2022-2023 until SY 2024-2025 with priority on the following areas of concern: Curriculum, Assessment and Instruction; Academic Support, Teacher Development, and Budget Support in order to efficiently carry out the Shared Vision and SMART Goals of the program. The program primarily aimed to:

- “Ensure that this generation of learners does not suffer a disadvantage in comparison to past and future generations;
- Ensure that this cohort of learners fully recover learning lost during the pandemic;
- Prioritize remedial or accelerated education approaches to address challenges and get all learners to grade-level proficiency; and,
- Invest appropriate resources to offset the learning losses, minimize drop-out rates, mitigate the potential downstream in the economic and labor market and address the social impact of learning losses” (Lagata 2022).

To achieve these goals, each Schools Division Office contextualized the learning recovery plan and SDO Legazpi City formulated the Learning Recovery Plan: ASPIRE – Accelerating Structures and Pedagogies to Improve Reading and numeracy Engagement. The intervention program on numeracy that was evaluated in this study is anchored on the ASPIRE learning recovery plan with the vision of making the learners functionally numerate in accordance with the prevailing competency standards by addressing the learning gaps brought about by the pandemic.

Aboard on its first year of implementation, one of the highlights of the R5-LRP is the development of a contextualized curriculum that is designed as a learning remediation and intervention program on teaching literacy and numeracy to Grades 1, 2 and 3 learners who were identified to have acquired learning loss due to the distance learning in the past two years (Lagata 2022). This was dubbed as the 8-Week Learning Recovery Curriculum that was implemented last August 22, 2022 to October 28, 2022. All public elementary schools deviated from covering the competencies specified in the Most Essential Learning Competencies (MELCs) of the BE-LCP for quarter 1 and implemented the 8-Week Learning Recovery Curriculum on literacy and numeracy instead. In this study, the focus is on the results of the implementation of the program focused on numeracy remediation and intervention.

The Regional Memorandum No. 104 s. 2022, re: Policy Guidelines on the Implementation of the 8-Week Learning Recovery Curriculum in Region V issued on August 4, 2022 mandated all Grades 1 to 3 learners to undergo remediation in literacy and numeracy at the start of the school year. The 8-Week LRC has the following features: grouping by ability based on the literacy and numeracy results; conduct of pre-test to determine where instruction will start; balance between structured and unstructured activities, and implementation of differentiated instruction (Lagata 2022). The week 1 of the curriculum was intended for conduct of pre-test on Mathematics to determine specific difficulties. The

pre-assessment tool was adopted from the Albay Numeracy Assessment Tools (ALNAT) that is a standardized tool in the Schools Division of Albay. The week 2 to 9 was the actual implementation of the 8-week Learning Recovery Program that is characterized by unstructured activities in the numeracy corners and structured lesson proper by learning ability group. Lesson maps were crafted and provided to teachers as a guide on how to implement appropriate teaching strategies and utilize materials (ready-made learner-centered activities and worksheets) for each ability group. In numeracy, the scope focused on the foundational skills that include number sense, addition, subtraction, multiplication, and division. The week 10 was scheduled for the administration of post assessment utilizing a standardized tool developed by the DepEd RO V to determine progress in numeracy skills.

With the foregoing discussions, the researcher deemed it necessary to take an in-depth analysis of the results of the pre-test and post-test and evaluate the effectiveness of the intervention program to further value the initiatives of the Division and of the Region in helping the learners recover learning losses or gaps brought about by the pandemic. With the results of the numeracy assessment administered in SDO Legazpi City on April 22, 2022 that revealed 82.12% of Grade 3 learners, 76.86% of Grade 2, and 47.79% of Grade 1 needs major support in numeracy, this study opted to focus on Grade 3 being the grade level with highest percentage of learners who need major support. The study specifically sought answers to the following questions:

- What is the numeracy level of the Grade 3 learners based on the pre-test and post-test results?
- Is there a significant difference between the pre-test and post-test results of the Grade 3 learners?
- What is the level of effectiveness of the implementation of the 8-Week Learning Recovery Curriculum as numeracy intervention program?
- How do the average percentage of attendance of the learners and of the teachers relate to the effectiveness of the implementation of the 8-Week Learning Recovery Curriculum? and,
- What activities can be proposed to strengthen the implementation of numeracy intervention program under the Learning Recovery Plan in the next two years?

As quasi-experimental research, this study hypothesized that there is no significant difference between the pretest and posttest results. Should there be any difference, this study explored if it can be attributed to the effectiveness of the implementation of the 8-Week Learning Recovery Curriculum.

2. Material and methods

2.1. Research Design

This study is quasi-experimental research that employed methodological triangulation to establish the credibility of the study. With the use of methodological triangulation in determining if the presumed significant difference in the pretest and post test results can really be attributed to the implementation of the 8-Week Learning Recovery Curriculum, the study used mixed-method research procedures that predicated on data interpretation using both quantitative and qualitative approaches.

Quantitative approach was used in determining if there is any significant difference between the pretest and posttest results of the Grade 3 learners wherein data is generated from a large sample size, in determining the level of effectiveness of the implementation of the intervention program, and in calculating the average percentage of attendance of the learners and teachers during the implementation of the intervention program. In determining the perceived best practices and areas for improvement that can be associated to the effectiveness of the intervention program, qualitative approach was used.

2.2. Study Site and Respondents

The research was conducted in the public elementary schools in the Schools Division of Legazpi City. A total of 3052 Grade 3 learners underwent the 8-Week Learning Recovery Curriculum in numeracy from the 42 elementary schools in the city. Out of these 3052 Grade 3 learners, scores in the pretest and posttest of 342 learners were analyzed for the purpose of this study. This number of sample scores is the computed sample size at 5% margin of error and 95% confidence level. Proportionate stratified random sampling was utilized to determine whose scores from the 21 schools that provided raw data shall be considered in the analysis. The software application called "The Hat" was used in randomly drawing the proportionate number of learners to be selected from each of the respondent schools. Of the 342 samples, there were 187 male and 155 female learners.

For triangulation purposes, there are 58 Grade 3 Mathematics teachers who responded to the survey and to the open-ended questionnaire. Some of them were interviewed. This number of teachers were from the 36 schools out of the 42 public elementary schools in the city. All the 10 districts were represented both by sample teacher- and learner-participants.

2.3. Research Instrument

To quantitatively evaluate the effect of the implementation of the 8-Week Learning Recovery Curriculum in Numeracy as an intervention program, the pretest and posttest results of the randomly selected 342 Grade 3 learners and the percentage of attendance of the learners and teachers were all collected using Google Form. The survey on the perception of the Grade 3 teachers on the effectiveness of the implementation of the intervention program was formulated and administered online also using Google Form. The survey was subjected to language and content validation by five experts in educational research to ensure quality assurance of the conciseness and alignment of the indicators.

An interview questionnaire composed of three open-ended questions was crafted to further elicit supplemental insights from the teachers that further validated the attribution of the result in the posttest to the effectiveness of the implementation of the intervention program. Not all teacher-participants were interviewed. Those with notable ratings and responses in the survey were prioritized for the interview to clarify or verify their interesting responses.

2.4. Data Analysis

The study analyzed the pretest and posttest results using SPSS software. With the total of 13 items in both tests, the mean score of the learners is interpreted as follows.

Table 1 Interpretation of Mean Scores in the Pretest and Posttest

Mean Score	Equivalent	Interpretation
11.05 -13	85% - 100%	Grade Ready
9.75 -11.04	75% - 84.99%	Light Intervention
8.45 - 9.74	65% - 74.99%	Moderate Intervention
0 – 8.44	0 – 64.99%	Full Intervention

Paired samples *t* test was the statistical treatment used to determine if there is any significant difference between the results. The scores of the 342 randomly selected Grade 3 learners in the pretest and post-test were subjected to paired-samples *t* test. This is to test the hypothesis that a significant difference does not exist between the pretest and posttest scores. If there is any difference, this study explored if it can be attributed to the implementation of the 8-Week Learning Recovery Curriculum for numeracy intervention. York (2017) detailed the steps on testing hypothesis with the paired-samples *t* test when a researcher has matching pretest and posttest scores of one group of participants. In this study, the Grade 3 learners are considered one group as they all participated in the intervention program and there is no comparison group.

The responses to the survey on the perception of the Grade 3 Teachers on the effectiveness of the implementation of the 8-Week LRC for numeracy intervention are presented in tables and were analyzed using descriptive statistics particularly using weighted mean. The indicators for the effectiveness of the implementation of the intervention program were categorized into four standards: a) capacity building of Grade 3 Mathematics Teachers, b) provision of support materials, c) implementation process of the intervention program, and d) parent support to the implementation of the intervention program. The respondents were asked to determine their extent of agreement to the statements. The weighted mean of the ratings for the indicators were interpreted as indicated in the table below.

Table 2 Interpretation of Ratings for the Effectiveness of the Intervention Program

Rating (Weighted Mean)	Interpretation
4.50 – 5.00	Strongly Agree (Very Effective)
3.50 – 4.49	Agree (Effective)
2.50 – 3.49	Neither Agree nor Disagree (Less Effective)
1.50 – 2.49	Disagree (Not Effective)
1.00 – 1.49	Strongly Disagree (Very ineffective)

To further establish the credibility of the study, the average percentage of attendance of the learners and teachers were determined and interpreted as follows:

Table 3 Interpretation of the Average Percentage of Attendance of Learners and Teachers

Average Percentage of Attendance	Interpretation
90% - 100%	Very Effective
80% - 89%	Effective
70% - 79%	Less Effective
60% - 69%	Ineffective
59% and below	Very ineffective

The interpretation shows that the average percentage of attendance of learners and teachers were related to the extent of effectiveness of the implementation of the 8-Week Learning Recovery Curriculum for numeracy intervention. Moreover, there were qualitative data gathered through interview and open-ended questions in the survey. The qualitative responses were interpreted upon thematic analysis.

3. Results and discussion

3.1. Level of Numeracy Skills of the Grade 3 Learners

While the 8-Week Learning Recovery Curriculum of DepEd Region V focused both on literacy and numeracy, this study explored the implementation of the curriculum for numeracy intervention. This study evaluated the results of the pretest that was administered using the standardized assessment tool of the Schools Division of Albay, called Albay Numeracy Assessment Tool (ALNAT) that was adopted by the region. As mandated, Legazpi City used the ALNAT for the pretest while in the posttest, the tool used was a standardized tool that covered the same competencies as the ALNAT that was crafted by a team organized by the DepEd ROV. Both tests are composed of thirteen (13) items. The results of numeracy assessment in the pretest and posttest determined the level of numeracy skills of the Grade 3 learners prior to and after the 8-week intervention.

Pretest. The mean score of the learners in the pretest is 8.03. This value corresponds to a numeracy skills level with the description “Full Intervention.” This indicates that the learners were not yet grade-ready. While efforts were done to facilitate distance learning through modules or online classes, this result revealed that the learners did not really acquire mastery of the numeracy skills expected of them to learn in Grade 1 and Grade 2 Mathematics which they all studied and passed during the two-years of pandemic. Pecjo (2022) concluded in his study that factors such as poor internet connection, poor study habits, and the distance learning modality affected the academic performance of grade 8 learners in mathematics; and because of these factors, the mathematics skills of the students were found out to have been developed only to a moderate extent. In this pretest results, the mathematics skills of the grade 3 pupils were not just moderately but poorly developed. This context drove the need to properly implement that proposed 8-Week LRC in numeracy. The pretest results determined the groupings of the learners by ability during the implementation of the intervention program.

Posttest. The mean score of the learners in the post assessment is 8.99. This value corresponds to a numeracy skills level with the description “Moderate Intervention.” The difference of 0.96 from the pretest mean score of 8.03 to the posttest mean score of 8.99 indicates that the learners, though were generally not yet still grade-ready, but improved slightly from the numeracy skills level of ‘full intervention’ to ‘moderate intervention’. Moderate intervention means that the learners have acquired some of the expected numeracy skills through the implementation of the intervention program but still needs follow up and more practice to escalate to light intervention then to grade-ready numeracy skill levels.

3.2. Significance of Difference between Pretest and Posttest Results

Table 4 shows the t-test for paired samples (correlated means) results of the pretest-posttest (n=342). It can be gleaned that there is a significant difference between the two reflective of the t-value of -7.218, $p < 0.05$. Hence, the null hypothesis is rejected.

Initially, this significant difference between the pretest and posttest results shall automatically be attributed to the implementation of the 8-Week Learning Recovery Curriculum in numeracy. Barnes et al (2016) stated that a main effect of state on math outcomes was associated with a stronger, numeracy-focused Tier 1 mathematics curriculum in one state. Similarly, in this study, the 8-Week Learning Recovery Curriculum on numeracy focused on fundamental math skills on number sense, addition, subtraction, multiplication, and division (Lagata, 2022). The approach on teaching that was by ability grouping enabled learners to focus on their specific needs, thus making learning more effective.

Table 4 SPSS Output for Paired t Test

Test type	Mean	Std. deviation	t-value	Sig. value	Interpretation	Decision to Ho
Pretest	8.03	2.91	-7.218	0.000	Significant	Reject
Posttest	8.99	2.93				

The significant difference between the pretest and pretest is indicative of effective implementation and relevant design of the 8-Week Learning Recovery Curriculum in Numeracy; however, it is not enough to conclude that the improvement can solely be attributed to it. This claim was verified further through survey conducted among the teachers who implemented the intervention program. The results in the survey on the efficacy of the program is presented in the succeeding discussion.

3.3. Level of Effectiveness of the Implementation of the 8-Week Learning Recovery Curriculum in Numeracy

The perception of the teachers on the effectiveness of the implementation of the 8-Week Learning Recovery Curriculum in Numeracy was regarded as relevant insights in supporting the significance of the difference in the results of the pretest and posttest.

3.3.1. Capacity Building of Teachers

Table 5 shows the mean ratings and standard deviation of the mean ratings to the statements that determine the capacity of the teachers in implementing the intervention program. The results revealed that the teacher-respondents generally strongly agree that the orientation that was conducted prior to the implementation of the 8-week LRC equipped them well of the necessary competencies in implementing the numeracy intervention program. The teachers were able to implement the program smoothly as they were guided by clear guidelines. During the implementation, it is notable that there had been constant monitoring and provision of technical assistance to the teachers, hence enabling them to implement the numeracy intervention more effectively. These indicators comprise the capacity building feature of the program as a support to the teacher-implementers and as a means of ensuring that the implementation of the program shall be effective. Patterson and Xu (2020) emphasized that “when teachers engage in rich academic conversations that inquire deeply into content and pedagogy, they have an opportunity to cultivate student capacity to engage in rich academic discourse, problem solving and mathematical learning.” With these findings, having a pool of teacher-implementers who were well-capacitated, monitored, and engaged, the implementation of the 8-Week LRC can really be very effective as shown in the analysis of the pretest-posttest mean scores.

Table 5 Capacity Building of Teachers

Indicators	Mean	SD	Description
The orientation equipped the teachers well of the necessary competencies in implementing the numeracy intervention program.	4.66	0.55	Strongly Agree (Very Effective)
The guidelines enabled the teachers to smoothly conduct the daily intervention plan on numeracy.	4.62	0.52	Strongly Agree (Very Effective)
The constant monitoring and provision of technical assistance by the school head, master teacher or supervisors enabled me to implement the intervention plan more effectively.	4.60	0.49	Strongly Agree (Very Effective)

3.3.2. Provision of Support Materials

Another standard that this study considered as relevant to the effectiveness of the implementation of the 8-Week LRC is the provision of support materials to the teachers and learners. Table 6 shows that the teachers only strongly agreed to the indicator on the provision of readily available assessment tools; but just agreed to the other indicators. These other indicators are along provision of instructional materials and support materials/equipment, and maintenance of classroom facilities and ancillary services that are relevant to the face-to-face implementation of the numeracy intervention program. While the availability of standardized pre and post assessment tools is of great importance to this study, the researchers found it remarkable that the teachers considered the provision of needed materials during implementation as only effective and not very effective.

Table 6 Provision of Support Materials

Indicators	Mean	SD	Description
The instructional materials were readily available and had been maximized in facilitating the teaching-learning process.	4.48	0.68	Agree (Effective)
The instructional materials provided were relevant and contributed to the achievement of the target competencies to be enhanced in the learning recovery.	4.48	0.73	Agree (Effective)
Provision of support materials and equipment like bond paper, printer, etc was in place and readily available as needed during the implementation of the 8-week curriculum on numeracy.	4.17	0.96	Agree (Effective)
Classroom facilities and ancillary services relevant to conduct of face-to-face classes were well maintained.	4.48	0.66	Agree (Effective)
Assessment tools were readily available and with clear instructions on its administration.	4.5	0.68	Strongly Agree (Very Effective)

Quality teaching and learning materials may have contributed more to the improvement of the numeracy skills of the learners especially that engagement of the pupils in unstructured activities in the numeracy corners is a daily feature of the 8-week LRC. The unstructured activities include manipulatives in the numeracy corners that were often printed and laminated by the teachers to be durable enough for daily use of the learners. The daily maintenance and updating of the learning materials in the numeracy corners challenged the teachers in terms of time and resources. As shown in Table 6, the teachers gave the lowest rating of 4.17 in the provision of materials and equipment like bond paper, printer, laminating machine, etc. This emphasizes their need for these materials to be in place and readily available during the implementation of the numeracy intervention program. This was confirmed when the teachers commonly mentioned that the worksheets, real objects, visual images, manipulatives and other learning materials in the learning centers or numeracy corners facilitated learning by doing and really contributed to the improvement of the learners' numeracy level. The teachers claimed that the use of learning centers or numeracy corners where the learners learn through hands-on differentiated activities and use of Concrete-Pictorial-Abstract (CPA) approach appropriate to the learners' ability group were among the best practices in the implementation of the 8-week LRC. With the significant difference between the pretest-posttest results after the use of CPA approach during the implementation of 8-Week LRC, this study

affirms the similar findings of the Kurniawan et al (2020) that CPA approach can encourage learners to solve math problems with nonstandard procedures; and in this study, the unstructured activities given to the learners as they engage in the learning centers have no given standard procedures as well. Being considered as best practice or feature of the implementation of the 8-week LRC, hence the in-dire need to sustain the availability of updated learning materials in the numeracy corners or learning centers.

Implementation Process. Table 7 shows the mean ratings for the indicators of effective implementation process of the 8-Week Learning Recovery Curriculum in Numeracy. The teachers generally strongly agreed to all the indicators of very effective implementation process of the intervention. The indicator with highest rating of 4.71 states that learning progress in numeracy was observed and measured through written and performance activities.

Table 7 Implementation Process of the 8-Week Learning Recovery Curriculum in Numeracy

Indicators	Mean	SD	Description
The daily routine on the conduct of the learning recovery plan on numeracy was religiously observed.	4.62	0.56	Strongly Agree (Very Effective)
The hands-on activities or manipulatives in the numeracy corners were engaging and motivating to the learners.	4.59	0.56	Strongly Agree (Very Effective)
The daily lesson proper with the learners by ability group facilitated learning of concepts appropriate to their ability.	4.64	0.55	Strongly Agree (Very Effective)
The individualized and grouped lessons and activities for learners according to their ability facilitated the achievement of target competencies to be enhanced.	4.64	0.52	Strongly Agree (Very Effective)
Learning progress in numeracy was observed and measured through written and performance activities.	4.71	0.46	Strongly Agree (Very Effective)
Improvement was observed in the learners' numeracy skills and such change can be attributed to the effective conduct of the intervention program.	4.62	0.52	Strongly Agree (Very Effective)

The indicator with lowest rating of 4.59, though still strongly agree, states that the hands-on activities and manipulatives in the numeracy corners were engaging and motivating to the learners. This can be linked to the lowest rating also on the provision of support materials that are needed in the preparation of manipulatives and other hands-on activities in the numeracy corners as shown in Table 6. Most significant in the results in Table 7 is the strong affirmation of the teachers that the improvement in the learners' numeracy skills was observed and such can be attributed to the effective conduct of the intervention program.

Based on the interview with the teachers, what they considered as best practices in terms of the implementation process of the numeracy intervention programs include provision of enough time to practice drills and learning routine, instruction by numeracy level or ability group, pupil-centered environment that facilitated self-motivation among the learners, provision of differentiated activities, and use of CPA approach with the aid of the coded worksheets, manipulatives, and real objects. This study also found that the teachers were able to implement the intervention better since the lesson maps, activities, worksheets and assessment materials were all readily available for them to use and execute. Darsow (2022) said that a robust implementation plan enables the success of any intervention program. With thorough crafting of the Learning Recovery Plan where the researcher herself has been immersed as one of the members of SDO Legazpi City's LRP Core Team, with the provision of blueprint on how to implement the 8-Week LRC and of the set of materials needed for the implementation, and with the constant monitoring and provision of technical assistance by the Education Program Supervisors, these findings affirm a robust implementation plan that paved the way towards the success of the 8-Week LRC for numeracy intervention as manifested in the significant difference in the pretest-posttest results.

3.3.3. Parents' Support

The implementation of the 8-Week LRC cannot be successful enough without the support of the parents. Table 8 shows that the respondents strongly agreed that the parents of the learners expressed strong support to the learning recovery program when they attended the orientation. The mean ratings they gave to the rest of the indicators of parents' support

were lower and meant that they agree but not strongly. The indicator with lowest rating of 4.16 states that the parents provided the needed learning materials of the pupils. They agreed that the parents did provide; but not strongly agreeing to it meant that the support of the parents on provision of materials to aid in learning can still be improved.

Table 8 Parent Support to the Implementation of the Intervention Program

Indicators	Mean	SD	Description
The parents attended and expressed support during the parents' orientation.	4.53	0.57	Strongly Agree (Very Effective)
The parents supported the regular attendance of the learners during the 8-week LRC implementation.	4.45	0.57	Agree (Effective)
The parents provided the needed learning materials of the pupils.	4.16	0.77	Agree (Effective)
The parents provided the pupils with snacks/lunch.	4.52	0.66	Strongly Agree (Very Effective)
The parents constantly coordinated with the teacher for any concerns relative to the learners' numeracy lessons/activities.	4.34	0.66	Agree (Effective)

As shown in Table 8, the indicators of parents' support to their children during the implementation of the numeracy intervention vary. These mean that parents can be involved in their children's education in different ways. Delgado (2019) stated that parental participation and support can improve learners' success and can result to increased academic performance. The support that the parents showed to the extent of sharing resources to help teachers with their need for additional resources for the preparation of learning materials must have contributed to the success of the implementation of the intervention program.

3.4. Attendance of Learners and Teachers during the 8-Week LRC Implementation

The average percentage of attendance of the learners and teachers during the implementation of the 8-Week Learning Recovery Curriculum in Numeracy is related to the effectiveness of the program. It is good to note that the average percentage of attendance of the Grade 3 teachers who handled numeracy is 98.64% while the average percentage of attendance of the learners is 96.10%.

Table 9 Attendance of Learners and Teachers

Participants	Average Percentage of Attendance
Learners	96.10%
Teachers	98.64%

These data mean that the implementation of the numeracy intervention program can be very effective given the high percentage of attendance among both teacher-implementers and learner-participants. The high percentage of attendance of the learners can be linked to the parents' strong support to the program. As Delgado (2019) identified as one of the advantages of parental involvement, he said that when there is good communication between parents and teachers, absenteeism decreases. Furthermore, Sekiwu (2020) found that regular school attendees perform differently from the chronic absentees, and that there is a positive relationship between school attendance and academic performance. Although this study did not statistically determine the relationship between attendance of the learners to their posttest results, the high percentage of attendance would ensure effective implementation of the program since the presence of the learners would mean engagement in the differentiated activities on a face-to-face modality.

4. Conclusion

The implementation of the 8-Week Learning Recovery Curriculum in Numeracy under the Learning Recovery Plan of the Schools Division of Legazpi City significantly improved the numeracy skills level of the Grade 3 learners as the difference between the pretest and posttest results was found to be significant. The teachers generally perceived that the implementation was very effective through the capacity building activities, provision of instructional, learning and

support materials, adherence to the implementation plan and well-monitored implementation process, and support of the parents. The regular attendance of almost all learners and teachers involved in the numeracy intervention program helped ensure its effectiveness. Further, based on the responses of the teacher-respondents, the feature of the 8-Week LRC that upholds balance between structured and unstructured activities through the establishment of functional learning centers or numeracy corners addressed the different numeracy skills level of the learners at their own pace; thus, encouraging self-motivation and self-reliance.

Based on the findings, it can be concluded that numeracy intervention program with similar features as that of the 8-Week LRC must be sustained and even enriched until all learners become grade-ready in terms of numeracy. To sustain or enrich numeracy intervention programs, the researcher recommends that the following activities be considered in the next two years of implementation of the Learning Recovery Program particularly in numeracy. First, maintain the availability of updated functional numeracy corners inside the classroom within every school year. Second, continuously capacitate teachers on how to implement numeracy intervention programs along the regular lessons under the MELCS. Third, provide more ready-made quality learning materials specifically manipulatives and game-based activities that are appropriate to the numeracy skills level of the learners. Fourth, consistently monitor the implementation of intervention programs and assess the learning progress of the pupils. Fifth, involve the parents and stakeholders by communicating to them assessment results and progress of learners during the intervention to encourage full support to the program. Lastly, funding should be allocated for intervention programs apart from the usual fund allocation for regular classes.

This study may have limitations in capturing other relevant factors that may affect the implementation of the 8-Week Learning Recovery Curriculum and those may be explored in other researcher undertakings. Nevertheless, with the efforts exerted in pursuing methodological triangulation of the data, this study banks on the significance of difference in the pretest-posttest results as indicator of effectiveness of the numeracy intervention program and such were confirmed by the teachers' perception on the quality of implementation of the program and of the regular attendance of the learners and teachers during its implementation. The pandemic may have hindered the numeracy skills of the learners in the past two years of no face-to-face classes, but with a robust learning recovery program, being grade-ready can be reached in a reasonable time.

Compliance with ethical standards

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Disclosure of conflict of interest

The corresponding author, CMM and coauthor, DGC have no conflicts of interest to disclose. Both authors declare that they have no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all participants included in the study.

Role of authors

CMM - Responsible in the research conceptualization, tool preparation, data gathering, and manuscript writing;
DGC - Took charge of the statistical treatment and analysis and overall checking and improvement.

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