

Efficacy of Interactive Remediation Materials (IRMa) towards the Improvement of Grade 6 Online Learners' Academic Performance in Araling Panlipunan

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Abstract: The study assessed the effectiveness of the Interactive Remediation Material (IRMa) on Grade 6 online pupils' academic performance in Araling Panlipunan. The research utilized an experimental pretest-posttest design to analyze the data. There were 27 Grade 6 online pupils of Butuan Central Elementary School who were involved via purposive sampling. The data collected from the participants were statistically treated through the mean, standard deviation, and paired t-test. Findings revealed that there was a significant improvement in the academic performance of the pupils as observed in the substantial increase in scores in their post-test versus their pre-test results. Thus, this implies an affirmative benefit of the interactive remediation material in improving the mastery of competency of the learners. Furthermore, the misconceptions or errors in the understanding of the pupils during the class discussion were mitigated as the Interactive Remediation Material (IRMa) was provided to the pupils to remediate the gaps in learning. The fresh and motivating approach of the IRMA redirects learners to master the competencies given. Finally, the IRMA deviates from the traditional formula of providing remediation as it highlights a new approach to teaching in this new normal set-up in education.

Keywords: Interactive remediation material, IRMa, academic performance, Araling Panlipunan

Introduction

Educating pupils is the core reason for all teaching-learning processes which is undertaken in each classroom in the formal education platform. However, not all the students can accommodate the learning processes, and these results in different learning outcomes. With this in mind, teachers need to create an intervention plan and not let these other students fall behind but still catch up with the lessons being discussed (Chikwature, W. & Oyedele, V., 2016). A remediation is one effective way to solve this problem since it is designed to close the gap between what learners know and what they're expected to know. In short, they reteach core skills.

Effects of COVID-19 pandemic to education

However, due to the shift in the delivery of instruction brought by the COVID-19 pandemic, it has redefined what it means to be "in the classroom", and many teachers are struggling with how to conduct intervention and remediation through remote or distance learning (Effective Intervention and Remediation Must be Personalized, 2021). On the research project, "Bridging the Gap in Remote Teaching and Learning," conducted by the team of Dr. Celina P. Sarmiento,

member of the National Research Council of the Philippines (NRCP) of the Department of Science and Technology (DOST), survey results imply that most students are not in a good condition to learn. Expectedly, 34.52% believe that majority of the students are having problems, and 27.70% believe that most students are struggling; while only 28.92% think that students are doing well. Thus, to catch up with the learning losses, remediation is necessary to ensure that learners can achieve the expected standards of quality education (Ducusin, 2021).

But even with talented teachers and solid plans, there will always be learners who may not fully understand a concept the first time they acquire the knowledge, especially now in distance learning. Without addressing the gaps in knowledge, learners will be unable to form the foundation needed for future success (Effective Intervention and Remediation Must be Personalized, 2021). Aside from the problem mentioned, the Department of Education (DepEd) has prescribed a screen time limit to the synchronous online classes to a maximum of two hours daily for Grade 6 learners. This makes it tougher for the teacher to conduct remedial instruction.

In the Schools Division of Butuan City, only Butuan Central Elementary School has offered pure online modality. While some learners thrive with this way of learning, many of them don't seem to be engaging in it; instead, they are lagging academically. In the case of Araling Panlipunan subject, the Grade VI learners of the school got a Mean Percentage Score (MPS) of 72% in S.Y. 2020-2021. Meanwhile, for the 1st Quarter of this school year, the Grade VI learners got an MPS of 73%. This result is far from the division's minimum passing rate of 80%.

Teacher's made Innovation, Intervention and Strategy

The Interactive Remediation Material (IRMa) is an asynchronous material prepared through a Google slide which the learners will manipulate at their own pace and time. The material incorporates various learning content, collaborative activities, and interactive features that would help the pupils in the learning process. The learning content is simplified and utilizes creative topic delivery, which learners will surely enjoy. In the IRMa, collaborative group activity is still possible. Since it uses Google slides, pupils can collaborate efficiently. Google slide is excellent for teamwork because it allows multiple people to work on the activity from different locations at the same time.

Another highlight of the IRMa is its interactive features such as using multiple-choice questions, filling in the missing word, ordering sequences, matching pairs, free answers, and drag-and-drop labelling using different web applications. In the multiple-choice questions, pupils need to click the icon and they will be forwarded to an application called Quizizz, in which they will be prompted to choose the correct options from the list. Aside from that, there will also be other sets of quizzes like true and false questions, matching pairs, and identification. The free answer presents questions that are of an open-ended nature for learners to write down the answers through Padlet or Answergarden applications. Content such as pictures, audio, GIFs, and videos are integrated with the above-listed interactive features.

All of its interactive learning content features provide immediate feedback upon the learner's submission of their answers. Moreover, a conversation tool is also available and embedded on

the IRMa. So even if the remediation is done asynchronously, pupils can still ask questions from the teacher, and the teacher can provide immediate feedback on the concern or question of the pupil.

The IRMa was crafted using varied learning materials aligned with the K to 12 curricula. The content of the materials was generated from the reference books in Araling Panlipunan, self-learning materials (SLMs), and the internet with its proper citation. Meanwhile, the instrument utilized to measure the effectiveness of the IRMa, the questions were taken from the Self-Learning Modules (SLMs) in Araling Panlipunan provided by DepEd Central Office. This was used to ensure that the tools floated among the respondents are all quality assured and have reliability.

Before the implementation of the IRMa, the respondents were instructed on how to use the material. After applying of the material, the researcher conducted a post-test to identify the effectiveness of the IRMA on the pupils.

Methodology

Participants and/or other Sources of Data and Information

The study employed the experimental pretest-posttest design. It was conducted among the 27 Grade VI online pupils of Section Ponce of Butuan Central Elementary School, Division of Butuan City. The participating section was chosen via purposive sampling.

Table 1. Participants of the study.

GRADE VI PUPILS	MALE	FEMALE	TOTAL
Section Ponce	15	12	27

Data Gathering Methods

The data were collected in three stages. In the first stage, a letter of permission to conduct the study was given to the School Principal of BCES, Instructional Head for Grade 6 and parents of the participants for their approval. For the second stage, the participants were instructed upon the course of the remediation. Then, the intervention was conducted immediately. Time-on-task upon the implementation was observed to have minimal interruptions. The study was conducted during remedial class only or every Friday of the week. Lastly, in the final stage, all the data were collated for quantification and analysis. All the information and data generated were treated as confidential.

Findings

Based on the gathered data, the author found out the following:

The table below shows the results of the pre-test and post-test of the 27 participants in the 30-item test conducted by the researcher before and after the utilization of the interactive remediation material. Results indicate a marginally significant increase from the pretest ($M = 13.67$, $SD = 3.88$) to its posttest result ($M=24.59$; $SD=2.27$).

Table 2. Pupils' Level of Academic Performance before and after the utilization of the remediation material.

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Pretest	13.67	27	3.883	.747
Posttest	24.59	27	2.275	.438

Table 2 clearly reflects that there was a remarkable increase in the Mean of pretest of the respondents after the utilization of the IRMA. This is an apparent intimation that the utilization of the interactive remediation materials is an effective and potent learning resources in increasing the level of performance in Araling Panlipunan of the learners.

Meanwhile, Table 3 below shows a significant effect of the IRMa on the academic performance of the pupils given with, $t(27) = -14.162$, $p < .005$, with the participants receiving higher scores in the post-test as compared to their pre-test scores. At an alpha level of 0.05, the computed p-value (0.000) signifies that the null hypothesis is rejected. This indicates an affirmative benefit of the remediation material in improving the mastery of competency of the learners.

Table 3. Paired T-test of the Pupils' Academic Performance before and after Remediation Intervention

Pair 1	Mean Difference	t-value	p-value	Decision
Pre-test vs. Posttest	-10.92593	-14.162	.000	Reject H_0

The result implies that the misconceptions or errors in the understanding of the pupils during the class discussion were mitigated as the Interactive Remediation Material (IRMa) was provided to the pupils to remediate the gaps in learning. The fresh and motivating approach of the IRMA redirects learners to master the competencies given. This type of approach is anchored on the Theory of Constructivism of Jerome Bruner (1966), in which he stated that the purpose of education is not to impart knowledge, but instead to facilitate a child's thinking and problem-solving skills since they are considered as active learners who construct their own knowledge. In addition, based from its philosophy, a good teacher needs to design lessons that help students discover the relationship between bits of information, and the teacher's role is to facilitate the learning process.

The result of the study also corresponds with the study Asio & Jimenez (2020) that remediation and intervention have a significant impact on the academic performance of pupils. Their research reveals that teachers should adopt the use of remediation activities as a part of the teaching methodology of a teacher to increase pupils' performance. Aside from that, to improve the remediation materials, teachers need to continuously attend more training and seminars on different teaching strategies for better teaching competency, and School heads should

continuously follow up on the implementation of remediation activities and make a constant checking of teacher's remediation notebook.

Conclusion

This study was conducted to determine the level of performance among online learners in Araling Panlipunan before and after the intervention and also to identify the significant difference in the performance of the online learners before and after the implementation of the Interactive Remediation Materials (IRMa).

In summary, the data showed that there is a marginally significant increase from the pretest ($M = 13.67$, $SD = 3.88$) to its posttest result ($M=24.59$; $SD=2.27$). It reflects that there was a remarkable increase in the Mean of pretest of the participants after the utilization of the IRMA. This is an apparent intimation that the utilization of the interactive remediation materials is an effective and potent learning resources in increasing the level of performance in Araling Panlipunan of the Grade 6 Online learners. Furthermore, the result also shows a significant effect of the IRMa on the academic performance of the pupils given with, $t(27) = -14.162$, $p < .005$, with the participants receiving higher scores in the post-test as compared to their pre-test scores. At an alpha level of 0.05, the computed p-value (0.000) signifies that the null hypothesis is rejected. This indicates an affirmative benefit of the remediation material in improving the mastery of competency of the learners.

The fresh and motivating approach of the IRMA redirects learners to master the competencies given. The misconceptions in the understanding of the pupils during the class discussion were mitigated as the Interactive Remediation Material was provided to the pupils

Recommendations

In light of the findings and conclusions, the following are recommended and forwarded for consideration:

1. The teachers may develop and use the IRMa in other topics in Araling Panlipunan to further validate the results of the study.
2. Further research is recommended to be carried out on other subjects and other learning modality to confirm the result of the study.
3. It is desirable to encourage School Administrators, Araling Panlipunan Coordinators and AP Teachers to create an IRMa on all topics not only the topics that needs re-teaching.
4. School administrators may consider conducting seminars and workshops for Araling Panlipunan teachers on the principles of IRMa construction.

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