



LEARNING THRU RADIO: THE EFFECTIVENESS OF RADIO-BASED INSTRUCTION (RBI) TO GRADE 6 PUPILS AND PARENTS OF BARANGKAS ELEMENTARY SCHOOL

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Article history:	Abstract:
<p>Received: 17th August 2021 Accepted: 17^h September 2021 Published: 27th October 2021</p>	<p>Corona Virus Disease (COVID-19) is still the main health crisis encountered by the whole world. It is the main reason why face-to-face classes are prohibited to prevent the spread of the said virus. Now education system will adapt new learning modality to maintain the education of millions of Filipino learners. In this regard, the Department of Education (DepEd) has introduced three types of learning delivery modalities that can tailor-fit to every learners' needs, regardless of the limitations to remote learning in their area. This study was conducted to determine how grade 6 pupils and parents understand the effectiveness of Radio-Based Instruction (RBI) in Barangkas Elementary School. This study also determine the significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of RBI. The study utilized descriptive design using survey method which was administered through direct contact with the respondents together with the informed consent. Frequency, percentage, mean, and Pearson correlation coefficient was used to analyse and interpret the data obtained from the respondents. Significant findings of the study revealed that both pupils and parents really understand the effectiveness of RBI with the composite mean scores of 2.704 and 2.68 respectively which described as extremely effective. Furthermore, the study rejected the null hypothesis and accepted the alternative one using Pearson correlation coefficient with $r = 0.99$, which interpreted as very strong positive relationship. Thus, there is a significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of RBI.</p>

Keywords: Corona Virus Disease, Department of Education, Radio-Based Instruction, Modular Distance Learning, TV and Radio-Based Teaching

INTRODUCTION

Corona Virus Disease (COVID-19) is still the main health crisis encountered by the whole world. It is the reason why face-to-face classes are prohibited and Education system will adapt new learning modality to maintain the education of millions of Filipino learners. "The Department of Education's topmost priority is to ensure the health, safety, and well-being of our learners while making sure there is continuance of basic education" says DepEd Secretary Leonor Magtulis-Briones.

In this regard, the Department of Education has introduced a delivery modality that can tailor-fit every learner's needs, regardless of the limitations to remote learning in their area. Nepomuceno Malaluan, DepEd Undersecretary, says the modality has three types: Modular Distance Learning, wherein written modules will be distributed to students who do not have access to devices and the internet; DepEd Commons, an online learning network designed to promote alternative learning delivery methods, can be used by students with internet access; and TV and radio-based teaching, wherein educational materials and instructions will be broadcasted. For TV and radio-based teaching, the education department has launched DepEd TV—a program that converts self-learning modules into video lessons that can be accessed through IBC13 and Solar Learning Outlets. It features "teacher-broadcasters" who underwent training on how to effectively deliver lessons via pre-recorded videos (Cantiga, 2020).

(Govph 2020) discussed the official statement on Learners Enrollment Survey Form (LESF) as to parents' preferred learning modality for their children. LESF data show that 8.8 M parents preferred Modular, 3.9 M Blended, 3.8 M Online, 1.4 M Educational TV, 900 K Radio-Based Instruction and around half a million preferred other modalities.

Deped.gov.ph (n.d.) stated that the Radio-Based Instruction (RBI) Program is an alternative learning delivery mode using radio broadcast to deliver the ALS programs. As a form of distance learning, it is able to expand access to education by bringing it to where the learners are. It aims to provide learning opportunities to listeners and enable them to acquire equivalency in basic education through the broadcast of lessons. As agreed by (Arbutante 2020) the RBI has impacted the lives of learners in so many different ways. It provided learning opportunities to learners who are unable to attend face to face sessions such as those who are working or living in remote areas, it was successful in expanding access and quality of distance education, and, most RBI learners who are A & E Test passers are employed locally and abroad, and many proceeded to tertiary education, which was highly unlikely if they were not given access to education to begin with. It has also the sole distinction of being longest-running Radio-Based Instruction Program in Mindanao.

In connection to this, Bataraza District I, Schools Division of Palawan offers Radio-Based Instruction as learning modality for the school year 2020-2021 blended with modules/hand-outs and worksheets prepared by teachers to accommodate the needs of the learners in the aforesaid district and to ensure the quality of learning despite of the pandemic.

This research conducted to determine the effectiveness of Radio-Based Instruction to grade 6 pupils and parents of Barangkas Elementary School, Bataraza District I. And also to identify if there is a significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of RBI. This will also collected some suggestions and recommendations from the respondents on how to make RBI more effective and efficient to utilize.

OBJECTIVES OF THE STUDY

This research study aimed to determine the effectiveness of Radio-Based Instruction to grade 6 pupils and parents of Barangkas Elementary School, Bataraza District I. Specifically, it answers the following questions:

1. What is the demographic profile of the respondents as to:
 - 1.1 Position; and
 - 1.2 Sex;
2. How do grade 6 pupils and parents understand the effectiveness of Radio-Based Instruction in terms of:
 - a) Awareness and Preparedness;
 - b) Availability and Capability;
 - c) Time Allotment;
 - d) Quality of Learning Instruction; and
 - e) Responsiveness and Learning Feedback
3. Is there a significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of RBI?
4. What is/are the pupils and parents suggestion/s or recommendation/s to make RBI more effective and efficient to utilize?

HYPOTHESIS

Ho - There is no significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of Radio-Based Instruction.

Ha - There is a significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of Radio-Based Instruction.

MATERIALS AND METHODS

The study utilized the descriptive design using survey method to determine the effectiveness of RBI in Barangkas Elementary School wherein researcher have direct contact with the respondents to get their response through the aid of self-made questionnaire in order to determine how Radio-based Instruction effective in times of pandemic. Through the use of survey questionnaire researchers were able to identify the significant relationship on how pupils and parents understand the effectiveness of RBI. Researchers also collected the suggestions and recommendations from the respondents on how to make RBI more effective specifically in the far-flung areas like Barangkas Elementary School. 3 point Likert Scaling was used in the questionnaire. Questionnaire is divided into seven (7) parts namely: Part I for

Demographic profile of the respondents; Part II for Awareness and Preparedness; Part III for Availability and Capability; Part IV for Time Allotment; Part V for Quality of Learning Instructions; Part VI for Responsiveness and Learning Feedback; and Part VII for Suggestions and Recommendations.

A. SAMPLING

The researchers used Purposive Sampling in this study wherein the respondents are the twenty (20) grade 6 pupils and their parents at Barangkas Elementary School. A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is different from convenience sampling and is also known as judgmental, selective, or subjective sampling (Crossman 2020). They have answered the survey questionnaire based on their own experience on utilization of Radio-Based Instruction.

B. DATA COLLECTION

This study used a self-made questionnaire that was administered through direct contact with the pupils and parents involved together with the inform consent if they want to participate as respondent of the study. Prior to this, researchers sent letter to school head of Barangkas Elementary School for approval. The data was collected from the answers of the respondents and summarize for interpretations. To ensure the reliability of the test there was a test-retest reliability conducted to grade 5 pupils and parents on the aforementioned school. (Vilagut 2014) explained that Test-retest reliability is the degree to which test scores remain unchanged when measuring a stable individual characteristic on different occasions.

C. ETHICAL ISSUES

The researchers included the informed consent in the survey questionnaire. This consent was given to the school head for the approval before to proceed in the conduct of this study. Prior to answering the questionnaire, respondents have read the consent and agreed if they wish to participate in the study. Answers was kept and remained strictly confidential and used for no other purpose except for this research only.

D. PLAN FOR DATA ANALYSIS

To analyse the gathered data, Frequency, Percentage and Mean was used by the researchers. For part I of the questionnaire, percentage will be computed and give interpretation in its results. For part II until part VI, researchers computed the frequency for each item and get the composite mean since it used 3- Point Likert scaling before the interpretation. In a Likert scale, a person selects one option among several that reflects how much they agree with the statement (Sinaian 2020). *(See table 1a below for interpretation)*. In order to get the significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of the RBI, researchers used the Pearson Coefficient. (Kenton 2020) explained that Pearson Coefficient is also referred to as the Pearson correlation coefficient or the Pearson Product-Moment Correlation Coefficient, it is a type of correlation coefficient that represents the relationship between two variables that are measured on the same interval or ratio scale *(See table 1b below for interpretation of Pearson coefficient)*. On the last part of the questionnaire, researcher collected and validated the suggestions and recommendations from the respondents and included in the research results. The results of this study was useful to determine the effectiveness of RBI in this time of pandemic. Proper conclusion was given based on the analysed data and the recommendations are based on the answers of the respondents on how to utilize the RBI effectively and efficiently.

Table 1a: 3-POINT LIKERT SCALE

Mean Range	Interpretation
2.34 to 3.0	Extremely effective
1.67 to 2.33	Moderately effective
1.0 to 1.66	Not at all effective

Table 1b: PEARSON COEFFICIENT

Range for Computed r	Interpretation
+.70 or higher	Very strong positive relationship
+.40 to +.69	Strong positive relationship
+.30 to +.39	Moderate positive relationship
+.20 to +.29	Weak positive relationship
+.01 to +.19	No or negligible relationship
0	No relationship (Zero correlation)
-.01 to -.19	No or negligible relationship
-.20 to -.29	Weak negative relationship
-.30 to -.39	Moderate negative relationship
-.40 to -.69	Strong negative relationship
-.70 or higher	Very strong negative relationship

RESULTS AND DISCUSSION

Demographic Profile of the Respondents.

Table 2a below presented the respondents of the study in Barangkas Elementary School which is composed of twenty (20) parents and pupils. As to the parents' gender, majority of them 70% (14) are females and 6 (30%) are males. And as to the pupils' gender, 10 (50%) of them are males and also 10 (50%) are females. They are all answered the given survey questionnaire together with the consent.

Table 2a: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

SEX	RESPONDENTS			
	Parents(f)	Percentage	Pupils(f)	Percentage
Male	6	30%	10	50%
Female	14	70%	10	50%
Total(n)	20	100%	20	100%

EFFECTIVENESS OF RADIO-BASED INSTRUCTION (RBI) ACCORDING TO PUPILS.

Table 2c below presented the data how twenty (20) pupils understand the effectiveness of RBI in terms of five identified parts and statements. It was shown that the respondents described the awareness and preparedness on RBI as extremely effective with the composite mean scores of 2.99 using the interpretation of 3-Point Likert Scale on table 1a. In terms of availability and capability the respondents described it as extremely effective with the composite mean scores of 2.75. In terms of time allotment in RBI, and responsiveness and learning feedback, the respondents also described it as extremely effective with the composite mean scores of 2.82, and 2.69 respectively. When it comes to quality of learning instructions the respondents described it as moderately effective with the composite mean scores of 2.27.

In general, the overall composite mean scores of how twenty (20) pupils understand the effectiveness of Radio-Based Instruction (RBI) is 2.704 and it was described as extremely effective which implied that the pupils did really understand the effectiveness of RBI as learning modality used in this time of pandemic and they found it as effective modality to support their learning.

Table 2c: EFFECTIVENESS OF RADIO-BASED INSTRUCTION (RBI) ACCORDING TO PUPILS (n=20)

STATEMENT	MEAN	DESCRIPTIVE MEANING
PART II: AWARENESS AND PREPAREDNESS		
1. Pupils and parents understand the learning process on RBI	3	Extremely Effective
2. Pupils and parents was well-oriented on RBI.	2.95	Extremely Effective
3. Both pupils and parents was prepared and ready before the conduct of RBI sessions.	3	Extremely Effective
4. Teachers (Radio Broadcasters) was well-trained and prepared on the use of RBI.	3	Extremely Effective
5. Pupils and parents are aware on the set radio station in the school and district.	3	Extremely Effective
COMPOSITE MEAN	2.99	Extremely Effective
PART III: AVAILABILITY AND CAPABILITY		
1. School has organize radio station.	2.95	Extremely Effective
2. Radios are readily available in every households.	2.7	Extremely Effective
3. Hand-outs and worksheets are available on or before the programs or session plays on air.	3	Extremely Effective
4. Parents and pupils are capable to follow the flows of programs or sessions on RBI.	2.9	Extremely Effective
5. Pupils are capable to learn through radio classes.	2.2	Moderately Effective
COMPOSITE MEAN	2.75	Extremely Effective

<i>PART IV: TIME ALLOTMENT</i>		
1. Time management for distribution and retrieval of worksheets is good enough.	2.8	Extremely Effective
2. Pupils and parent are tune-in on time.	2.65	Extremely Effective
3. Time schedule for every subjects and sessions was organized.	3	Extremely Effective
4. Hand-outs and worksheets was distributed on time.	2.95	Extremely Effective
5. Time for answering the worksheets are good enough.	2.7	Extremely Effective
COMPOSITE MEAN	2.82	Extremely Effective
<i>PART V: QUALITY OF LEARNING INSTRUCTIONS</i>		
1. Teachers (Radio Broadcasters) deliver the lesson properly.	2.7	Extremely Effective
2. Directions and instructions are clear and easy to understand.	2.05	Moderately Effective
3. Every lesson was made interesting.	2.4	Extremely Effective
4. Pupils and parents understand the lesson plays on radio.	2.1	Moderately Effective
5. Pupils and parents are able to cope with the given instruction on radio.	2.1	Moderately Effective
COMPOSITE MEAN	2.27	Moderately Effective
<i>PART VI: RESPONSIVENESS AND LEARNING FEEDBACK</i>		
1. Pupils are able to respond to questions ask by the teachers on radio.	2.3	Moderately Effective
2. Lessons are interesting that makes pupils become responsive.	2.45	Extremely Effective
3. Pupils and parents' queries and clarifications was well-addressed.	2.85	Extremely Effective
4. Learning feedbacks was reported on time to both pupils and parents.	2.95	Extremely Effective
5. Pupils and parents' feedback on the delivery of lessons was well-accommodated.	2.9	Extremely Effective
COMPOSITE MEAN	2.69	Extremely Effective
OVERALL COMPOSITE MEAN	2.70 4	Extremely Effective

EFFECTIVENESS OF RADIO-BASED INSTRUCTION (RBI) ACCORDING TO PARENTS.

Table 2d below presented the data how twenty (20) parents understand the effectiveness of RBI in terms of five identified parts and statements. It was shown in the table that the respondents described awareness and preparedness on RBI as extremely effective with the composite mean scores of 2.97. In terms of availability and capability, and time allotment the parents described it as extremely effective with the composite mean scores of 2.77 and 2.76 respectively using the interpretation of 3-Point Likert Scale. In terms of quality of instructions using RBI the parents described it as moderately effective same as how pupils understand it with the composite mean scores of 2.26. And when it comes to the responsiveness and learning feedback, the parents also described it as extremely effective with the composite mean scores of 2.68.

In general, the composite mean scores of how twenty (20) parents understand the effectiveness of RBI as support learning modality is 2.68 and it was described as extremely effective which implied that the parents found RBI as effective learning modality in this time of pandemic to support the learning and education of their children.

Table 2d: EFFECTIVENESS OF RADIO-BASED INSTRUCTION (RBI) ACCORDING TO PARENTS (n=20)

STATEMENT	MEAN	DESCRIPTIVE MEANING
<i>PART II: AWARENESS AND PREPAREDNESS</i>		
1. Pupils and parents understand the learning process on RBI	3	Extremely Effective
2. Pupils and parents was well-oriented on RBI.	3	Extremely Effective
3. Both pupils and parents was prepared and ready before the conduct of RBI sessions.	2.9	Extremely Effective
4. Teachers (Radio Broadcasters) was well-trained and prepared on the use of RBI.	2.95	Extremely Effective
5. Pupils and parents are aware on the set radio station in the school and district.	3	Extremely Effective
COMPOSITE MEAN	2.97	Extremely Effective
<i>PART III: AVAILABILITY AND CAPABILITY</i>		
1. School has organize radio station.	3	Extremely Effective
2. Radios are readily available in every households.	2.65	Extremely Effective
3. Handouts and worksheets are available on or before the programs or session plays on air.	3	Extremely Effective
4. Parents and pupils are capable to follow the flows of programs or sessions on RBI.	2.75	Extremely Effective
5. Pupils are capable to learn through radio classes.	2.45	Extremely Effective
COMPOSITE MEAN	2.77	Extremely Effective
<i>PART IV: TIME ALLOTMENT</i>		
1. Time management for distribution and retrieval of worksheets is good enough.	2.8	Extremely Effective
2. Pupils and parent are tune-in on time.	2.5	Extremely Effective
3. Time schedule for every subjects and sessions was organized.	3	Extremely Effective
4. Handouts and worksheets was distributed on time.	2.95	Extremely Effective
5. Time for answering the worksheets are good enough.	2.55	Extremely Effective
COMPOSITE MEAN	2.76	Extremely Effective
<i>PART V: QUALITY OF LEARNING INSTRUCTIONS</i>		
1. Teachers (Radio Broadcasters) deliver the lesson properly.	2.55	Extremely Effective
2. Directions and instructions are clear and easy to understand.	2.25	Moderately Effective
3. Every lesson was made interesting.	2.3	Moderately Effective
4. Pupils and parents understand the lesson plays on radio.	2.05	Moderately Effective
5. Pupils and parents are able to cope with the given instruction on radio.	2.15	Moderately Effective
COMPOSITE MEAN	2.26	Moderately Effective
<i>PART VI: RESPONSIVENESS AND LEARNING FEEDBACK</i>		

1. Pupils are able to respond to questions ask by the teachers on radio.	2.1	Moderately Effective
2. Lessons are interesting that makes pupils become responsive.	2.4	Extremely Effective
3. Pupils and parents’ queries and clarifications was well-addressed.	2.9	Extremely Effective
4. Learning feedbacks was reported on time to both pupils and parents.	2.85	Extremely Effective
5. Pupils and parents’ feedback on the delivery of lessons was well-accommodated.	2.95	Extremely Effective
COMPOSITE MEAN	2.64	Extremely Effective
OVERALL COMPOSITE MEAN	2.68	Extremely Effective

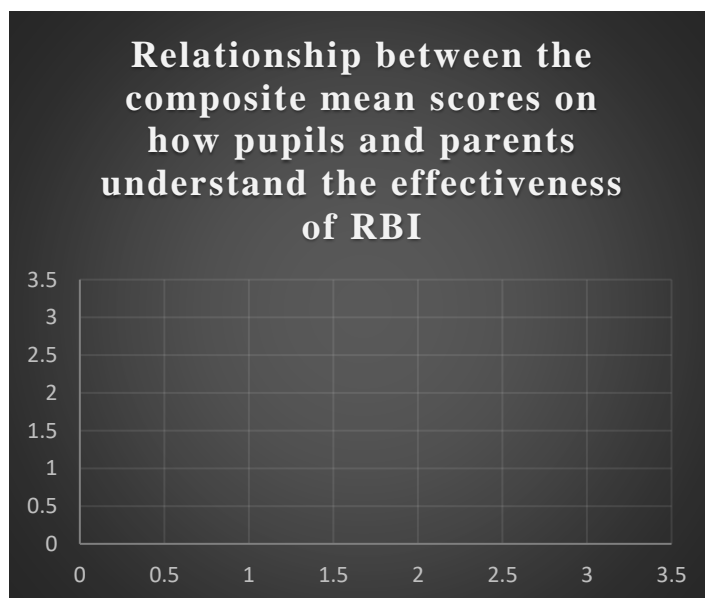
RELATIONSHIP BETWEEN HOW PUPILS AND PARENTS UNDERSTAND THE EFFECTIVENESS OF RBI.

Table 3a presented the composite mean scores of five parts which was answered by the respondents. Referring to the arbitrary scale on Table 1b (Interpretation for Pearson Correlation Coefficient) the interpretation of $r = 0.99$, it state that there is a very strong positive relationship between the composite mean scores on how pupils and parents understand the effectiveness of Radio-Based Instruction (RBI). It implied that the understanding of both pupils and parents on the effectiveness of RBI are related to each other.

Table 3a: PEARSON CORRELATION COEFFICIENT

PARTS	PUPILS (X)	PARENTS (Y)
Awareness and Preparedness	2.99	2.97
Availability and Capability	2.75	2.77
Time Allotment	2.82	2.76
Quality of Learning Instructions	2.27	2.26
Responsiveness and Learning Feedback	2.69	2.64

	<i>Column 1</i>	<i>Column 2</i>
Column 1	1	
Column 2	0.992812	1



The scatter diagram above shows that there is a positive correlation between how pupils and parents understand the effectiveness of RBI.

CONCLUSIONS

Based on the significant findings of the study, the following conclusions were drawn: Both pupils and parents really understand the effectiveness of Radio-Based Instruction in Barangkas Elementary School which described as extremely effective in this time of Covid-19 pandemic in terms of awareness and preparedness, availability and capability, time allotment, quality of learning instruction, and responsiveness and learning feedback. They both found it as effective learning modality to support their learning even without face to face classes. It was agreed by (Arbutante 2020) that the RBI has impacted the lives of learners in so many different ways. It provided learning opportunities to learners who are unable to attend face to face sessions such as those who are working or living in remote areas, it was successful in expanding access and quality of distance education. Moreover, radio holds great potential in terms of supporting students who are learning at a distance (Chandar and Sharma 2003).

Based on the results of survey computed using Pearson Correlation Coefficient which is $r = 0.99$, it state that there is a very strong positive relationship. This study will reject the null hypothesis and accept the alternative hypothesis. Thus, there is a significant relationship between the composite mean scores on how pupils and parents understand the effectiveness of RBI.

RECOMMENDATION

Based on the conclusions of the study, the following recommendations are offered for considerations:

To the Script Writers, and Teacher-Broadcasters:

1. Make the lesson more interesting to listen to and deliver it in a way that the IP's learners/listeners are able to follow the instructions. If possible, use tagalog instructions and discussions for them to cope and meet the objective of the lesson.
2. Do not air or play the lesson/sessions very fast for pupils/listeners can absorb all the learnings and follow the flow of the sessions.
3. Explain Mathematics, English, and Science sessions in a way that the IP's learners/listeners can understand it easily.

To the Radio Station Management:

1. Make it sure that the connection of radio' channel/frequency is stable before playing lesson/session on the air to avoid interruption to all the listeners.
2. Address the problems encountered by the listeners when it comes to the connection of radio channel/frequency.
3. Provide other way to learners who do not have radios at home for them to master the required competencies even without tuning in a radio.

To the Teachers/Advisers:

1. Teacher should give remediation activities to those who needs support.
2. Teacher should visits the pupils to monitor their progress and give assistance to those parent who are not able to read and write.
3. Teachers should communicate the parents/pupils from time to time using any means to know the problem in answering the worksheets and difficulties in tuning in a radio.

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