

Does Intervention Matter In The Reading Performance Of Elementary Pupils In The Philippines?

Ruth G. Luciano, Ph.D., Vivian A. San Pedro, Soledad M. Roguel.

Abstract: This study aimed to describe the performance in the Phil-IRI test of 1,697 Grade II pupils from 19 schools in San Miguel North District, Bulacan during the School Year 2014-2015 after implementing a set of intervention activities. To determine the effectiveness of the strategies employed in preparing pupils for the Phil-IRI post test, t-test for correlated samples was used to compare the pre-test with the post-test results. The school heads and teachers rated their preparation of Grade II pupils for the Phil-IRI post test. The reading levels of pupils were categorized as frustration, instructional, and independent in silent reading speed, word recognition, and comprehension. In silent reading, there was a huge improvement for the slow readers; it increased from 23.60% to 45.98% and for the fast readers from 19.46% to 37.35%. For the average group, however, from 34.56% it only increased to 41.2%. The mean difference was statistically significant for the slow and the fast group but not for the average group. Similar trend was observed in word recognition and comprehension levels. The mean difference for the three levels in the pre- and post-test results were statistically significant, however, the increase for the instructional group was smaller. The different learning activities given resulted to a significant improvement in pupils' reading and comprehension level but it is unclear as to which intervention strategy was most effective. It was recommended to systematically assess the strategies employed and to have a uniform set of criteria for gauging pupils reading improvement. Furthermore, performance target must be set and teachers who have attained such target must be rewarded.

Index Terms: comprehension, Phil-IRI results, reading performance, silent and oral reading tests, word recognition

1. INTRODUCTION

The importance of reading cannot be overemphasized. Bro. Armin Luistro, former Secretary of Education, said that it is important to assess the reading capability of students because reading is the foundation of all academic learning. "If pupils fail to master basic reading skills at the outset, it will be a constant struggle for them to get through other disciplines successfully, thus depriving them of the chance to become literate and productive individuals [1]." The results of the Phil-IRI for reading of Grade II pupils in School Year 2014-2015 in San Miguel North District (SMND), Bulacan revealed that the pupils' reading performance was below par. Of the 894 (43.97%) pupils who were in the "frustration" level in the pre-test, 253 (16.67%) remained in the same category in the post-test in oral reading test while three remained non-readers. Meanwhile, the result of the silent reading also revealed that of the 861 (45.98%) of the pupils who were in the "slow" category during the pre-test, 251 (23.60%) of them did not improve in the post-test and remained in the same level. In one of the elementary schools in San Miguel North District, Bulacan, there were six (10%) out of 61 Grade II pupils who fell in the "frustration" level in the final oral reading test. The above-mentioned reading profile of the Grade II pupils motivated and challenged the head/ administrator of the said school to help the pupils in improving their reading abilities which will redound to their academic performance and to the school's achievement and competitiveness as well. This statement somehow encapsulates the intention of this study: "We have a moral obligation to empower the coming new generation with literacy for it makes us truly human. Our task is to ensure

literacy for all children [2]." Literacy knows no limits. It is a life-long journey. A child's right to read is infinite; hence, some intervention activities in reading must be planned, implemented and evaluated.

II. METHODOLOGY

This study used the descriptive research design. It aims to accurately and systematically describe a situation or a phenomenon without controlling or manipulating any variables, but only observing and measuring them [3]. The 2014-2015 Phil-IRI Results for English II from the 19 schools in SMND, Bulacan was utilized in this study. The Phil-IRI test was not administered during the conduct of the research but instead the available data in the division office were used. To analyze the pupils' preparation for the Phil-IRI test administration, the school heads and teachers rated themselves in a 4-point Likert Scale with verbal descriptions as follows: 4 - Exceed Expectations, 3 - Meets Expectations, 2 - Meets Some Expectations and 1- Does Not Meet Expectations. Weighted means were also computed for both groups. To analyze and describe the reading performance of Grade II pupils in SMND, Bulacan based on the 2014-2015 Phil-IRI results, the following were used as guides:

The number of words and questions varies every test as different sets of material were used in every pre-test and post-test. Pre-determined criteria were used in the analysis and interpretation of pupil's reading level in the Phil-IRI. These criteria included the percentage of word recognition accuracy and percentage of correct answers to comprehension questions. The Phil-IRI adopted the set of criteria for word recognition (Phil-IRI Manual and User's Guide) for grades 1 and 2 as follows [5]:

Table 1. Criteria for Word Recognition

Level	Word Recognition	Comprehension
Independent	99% or higher	90% or higher
Instructional	85% or higher	75% or higher

- Dr. Ruth G. Luciano is currently working as I.T. Instructor at Nueva Ecija University of Science and Technology (NEUST). She is a former Dean of Education in M.V. Gallego Foundation Colleges, Inc. Philippines. e-mail: rcgluciano@gmail.com
- Ms. Vivian A. San Pedro is a graduate of Master of Arts in Education major in Educational Management at M.V. Gallego Foundation Colleges, Inc., Philippines. e-mail: vsp69@yahoo.com
- Dr. Soledad M. Roguel is the Research Director of M.V. Gallego Foundation Colleges, Inc., Philippines. e-mail: smroguel2017@gmail.com

	(Grades 1 and 2)	
Frustration	below 85% (Grades 1 and 2)	below 50%

To determine a pupil's reading level in oral reading, the table of equivalence below was used.

Table 2. Criteria for Reading Level in Oral Reading

Word Recognition	Comprehension	Reading Level
Independent	Independent	Independent
Independent	Instructional	Instructional
Independent	Frustration	Frustration
Instructional	Independent	Independent
Instructional	Instructional	Instructional
Instructional	Frustration	Frustration
Frustration	Frustration	Frustration
Non Reader	Listening Capacity	Non reader

Speed

The Phil-IRI Silent Reading Test gave quantitative information about the pupil's silent reading capabilities. Quantitative information showed the reading levels namely: Independent, Instructional and Frustration. Furthermore, it used predetermined set of criteria in identifying the reading levels of the pupils such as the reading speed and percentage of correct answers to comprehension questions. It adopted the combination of bands of reading rate (words per minute) or WPM (Phil-IRI Manual and User's Guide). The table below shows how a pupil could be classified into independent, instructional and frustration in silent reading. The first column was the pupil's reading level; the second was the pupil's reading speed using word per minute (WPM) while the third column was the pupil's comprehension.

Table 3. Phil-IRI Silent Reading Test Criteria

Reading Level for Grade II	Reading Speed - Word Per Minute (WPM)	Comprehension
Independent	Fast Readers - 100 and above	90-100% correct answers
Instructional	Average Readers - 61 to 99	75-89% correct answers
Frustration	Slow Readers - 60 and below	74% and below correct answers

To determine the effectiveness of the activities made in preparing pupils for the Phil-IRI post-test, t-test for correlated sample was used to compare the pre-test with the post-test results.

III. RESULTS AND DISCUSSION

1. Preparing Pupils for the Phil-IRI test in English.

The reading program or activities for Grade II pupils of the 19 schools in School Year 2014-2015 were analyzed to determine the extent of preparations made by the school heads and teachers for the Phil-IRI test in the said year. A reading plan or planned activities for reading are necessary to get better results. The activities listed in the first column of Table 4 were what school heads and teachers were expected to do or undertake long before the administration of the Phil-IRI tests to fully prepare their pupils for the said test. The school heads and their teachers were asked to rate each item or activity to determine how well they prepared their pupils for the said test. Based on the mean scores shown in Table 4, the school heads and their teachers strongly believed that they exceeded the expectations or they were doing more than what were expected of them in seven out of 10 activities which they rated, with mean ratings ranging from 3.25 to 3.41. These activities or items were as follows: "Selections/stories/activities were well chosen/planned before or at the start of the school year"; "They fit the pupils' abilities; they were

Table 4. Preparation of Grade II Pupils for the Phil-IRI Test in English

Item Statements	School Heads	Teachers	Ave. Mean	VD	χ^2
1. Selections/stories/ activities were well chosen/ planned before or at the start of the school year.	3.37	3.44	3.40	EE	1.07
2. The selected materials fit the pupils' abilities; they were relevant and useful.	3.47	3.35	3.41	EE	1.40
3. Learning activities and guide questions were well planned or well-prepared way ahead of time.	3.42	3.26	3.34	EE	5.66
4. Each activity was preceded by clear instructions to guide pupils on what to do.	3.26	3.35	3.30	EE	2.30
5. Listening or reading activities and questions were sufficient to meet the objectives or to develop the pupils' reading abilities.	3.32	3.23	3.27	EE	.289
6. Remedial listening/	3.26	3.33	3.29	EE	.784

reading activities were provided to pupils who needed remediation after each activity					
7. Different reading tutorial schemes were adopted such as peer tutoring, listening to tape recorded or video-taped selections, follow-up, library/homework for reading, etc. for thorough learning.	3.11	3.16	3.13	ME	.154
Item Statements	School Heads	Teachers	Ave. Mean	VD	x ²
8. The PHIL-IRI objectives for reading were clearly explained to parents and pupils at the beginning of the school year and their support was solicited for better PHIL-IRI results.	3.16	3.35	3.25	EE	1.42
9. All concerned were fully aware of the objectives of the Phil-IRI and the things to be done for better results.	3.16	3.26	3.21	ME	3.77
10. A general review was conducted a day or two before the Phil-IRI test administration to bridge some gaps in learning reading.	3.32	3.40	3.14	MS E	1.53
GRAND MEAN	3.28	3.31	3.27	EE	

Legend:

- VD Verbal Description
 1.00- 1.74 Does Not Meet Expectations (DNME; not doing what is supposed to be done)
 1.75 – 2.49 Meets Some Expectations (MSE; doing less than what is expected)

- 2.50 – 3.24 Meets Expectations (ME; doing what is expected)
 3.25 – 4.00 Exceeds Expectations (EE; doing more than what is expected)
 NS Not Significant

relevant and useful"; "Learning activities and guide questions were well-planned/well-prepared way ahead of time"; "Each activity was preceded by clear instructions to guide pupils on what to do"; "Listening/reading activities/questions were sufficient to meet the objectives or to develop the pupils' reading abilities"; "Remedial listening/ reading activities were provided to pupils who needed remediation after each activity"; and "The Phil-IRI objectives for reading were clearly explained to parents and pupils at the beginning of the school year and their support was solicited for better Phil-IRI results." They rated themselves lower in the remaining three activities or items, with verbal description of "Meets Expectations" which means they were doing what were expected of them. These activities were as follows: "Different reading tutorial schemes were adopted such as peer tutoring, listening to tape recorded or video-taped selections, follow-up, library/ homework for reading, etc. for thorough learning"; "All concerned were fully aware of the objectives of the Phil-IRI and the things to be done for better Phil-IRI results"; and "A general review was conducted a day or two before the Phil-IRI test administration to bridge some gaps in learning reading." These were the activities that the school heads and teachers need to improve on. Overall, the school heads and their teachers had the notion that they did more than what they were supposed to do to help their pupils become proficient in reading, as shown in the grand mean of 3.27 "Exceeds Expectations". The x² results that compared the school heads and teachers rating by categories of expectation revealed that they did not differ in their ratings.

2. Reading Performance of Grade II Pupils Based on the Phil-IRI Results in Three Categories: Word Recognition, Comprehension and Speed The data on reading readiness or performance of Grade II pupils based on three categories mentioned above were consolidated and presented in Figure 1, 2 and 3. However, before presenting the findings, it is but proper to discuss first how scores were categorized and verbally interpreted.

2.1 Speed level. The speed level was determined by the number of words read correctly per minute (WPM) such as "independent" (100 above WPM), "instructional" (61-99 WPM) and "slow" (60 and below WPM).

2.2 Word recognition. This was a graded list of 20 words found in the passages. Each pupil read the word for a minimum of five (5) seconds. It was used by teachers to get the rough estimate of each pupil's reading level - independent, instructional and frustration. If a pupil read correctly 18-20 words, he/she was in the "independent level"; if he/she read correctly 14-17 words, he/she was in "instructional" level; and if he/she read correctly only 14 words and below, he/she was in the "frustration" level.

2.3 Comprehension. The comprehension phase of the Phil-IRI included questions which were taken from passages arranged in the order of difficulty as literal,

inferential/interpretative, critical, creative and valuing/integration/application. The number of questions for Grade II pupils varied in the pre-test and post-test. The comprehension ability of each pupil would decide his/her reading level - "independent" if he or she answered 90% of the questions correctly; "instructional" if he or she answered 75% of the questions correctly; and "frustration" if he or she only answered 50% of the questions concisely.

Speed Reading

The consolidated results of 2014-2015 Phil-IRI for oral and silent reading are shown in Figure 1, 2 and 3. Figure 1 is the graphical representation of the pre-test and post-test results in the Phil-IRI for silent reading in terms of speed level or reading speed. The graph indicates the percentage of pupils who were classified as slow, average and fast in terms of speed level. During the pre-test, 45.98% of the total population was slow; 34.56% were average and 19.46% were fast. After the different activities or preparations were made by the teachers in order to enhance the silent reading performance of the pupils, the post-test results revealed that the slow readers were reduced by 50%, from 45.98% to 23.60%. There was a huge improvement. Similar results occurred for the fast readers but not for the average, where only 41.20% of the population had improved their speed after the intervention activities compared to the 34.56% in the pre-test. For the fast readers, the number of pupils who gained improvement in terms of reading speed was almost double, from 19.46% to 37.35%.

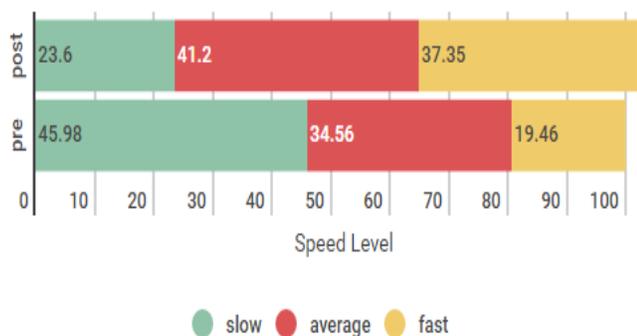


Fig. 1. Percentage increase in silent reading by category (N = 1,697)

The post-test result for reading speed suggests that most of the pupils have average speed in silent reading. With reference to the t-test between the pre- and the post-tests, the big reduction in the number of slow learners and big increase of the fast learners in the post-tests suggest that the different preparations made by the teachers helped a lot. As shown in Table 5 below, the difference between the pre-test and post-test was significant for the slow group (t=4.09, p < .01) and the fast group (t=4.90, p < .01) but not for the average group.

Table 5. Pre- and Post-test Difference for Silent Reading by Category

Speed Level	Mean Difference	Std. Deviation	t- value	Level of Si. (2-tailed)
Slow	22.37	19.88	4.91	Significant

Average	-6.64	16.53	-1.75	Not Significant
Fast	-17.89	19.07	-4.09	Significant

Although there is a noticeable increase in the percentage of pupils that have improved their reading speed, it is still unclear as to which reading intervention activity was the most effective; hence, the need to suggest a uniform set of intervention activities and criteria when gauging the pupils' improvement in silent reading. As far as intervention is concerned, Morin (2019) stated that "...the goal is for the school to intervene, or step in, and start helping before anyone falls really far behind [4]."

Word Recognition

The reading levels of the pupils for word recognition in the pre- and post-tests classified according to frustration, instructional and independent levels are shown in Figure 2. In the pre-test, 51.32% of the pupils were in the frustration level; 31.62% were in the instructional level while 16.18% were in independent level. After giving the pupils different learning activities in preparation for their Phil-IRI test, post-test results show a big reduction in number of pupils in the "frustration" level, from 51.32% to 24.82%; not so much increase in number for those in the "instructional" level, from 31.62% in pre-test to 39.62% in the post-test. Huge increase, more than double was observed for those in the "independent" level, from 16.18% in the pre-test to 35.87% after the intervention activities. The mean difference in the pre-test and post-test results in word recognition shown in Table 6 revealed that the mean difference for the three levels were also statistically significant but the instructional group increase was smaller although it was also statistically significant.

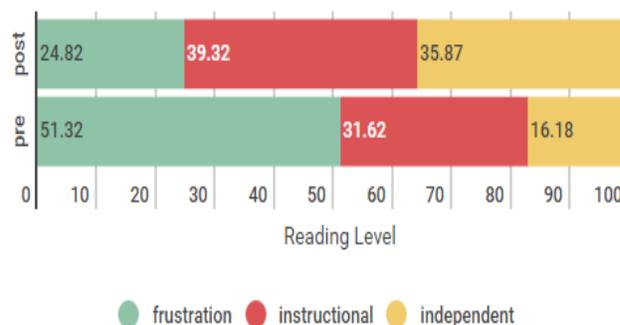


Fig. 2. Percentage increase in word recognition by category

Table 6. Mean Difference for Pre-test and Post-test for Word Recognition

Reading Level	Mean	Std. Deviation	t- value
Frustration	26.50	20.66	5.59**
Instructional	-7.70	11.48	-2.92*
Independent	-19.69	16.11	-5.33**

* Significant at p ≤ .05

** Significant at p ≤ .01

Comprehension Levels

The data which pertained to the pupils' comprehension levels in the pre-test and post-test are shown in figure 3. As shown in this figure, 49.99% of the pupils were in the frustration level in the pre-test while in the post-test, this percentage was reduced

to 25.62%. For the instructional level, the post-test yielded 39.31% compared to the pre-test of 32.2%, while for the independent level, a huge increase in the number of pupils in the post test could be observed, from 17.19% in the pre-test to 37.77% in the post-test. The implication is that the intervention activities of the teachers in some schools helped their pupils improved their comprehension level and in reading proficiency as well.

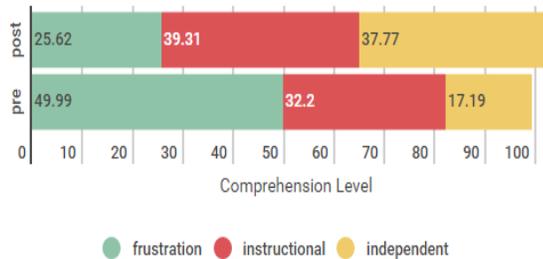


Fig.3. Percentage increase in reading comprehension by category

Table 7. Mean Difference for Pre-test and Post-test for Comprehension

Comprehension	Mean Difference	Std. Deviation	t value
Frustration	24.38	20.13	5.28**
Instructional	-7.10	12.63	-2.45*
Independent	-20.58	17.93	-5.00**

* Significant at $p \leq 0.05$

** Significant at $p \leq 0.01$

The pre-test and post-test mean differences were tested using the t-test and the results were all statistically significant. Simply stated, the teachers or the schools' intervention activities to improve the Phil-IRI scores of pupils resulted to a significant improvement across three (3) levels. The mean difference in the pre-test and post-test was significant at $p \leq .01$ for the frustration ($t=5.28$) and independent group ($t=5.00$) but significant only at $p \leq .05$ for the instructional group ($t=-2.45$).

IV. CONCLUSIONS

This study was conducted in nineteen (19) public schools of DepEd-San Miguel North District, Bulacan. It aims to describe the reading performance of the 1,697 Grade II pupils, based on the pre-test and post-test scores in S.Y. 2014-2015, after implementing a set of intervention activities. Using the descriptive normative survey, the study shed light on the reading performance of Grade II pupils in the said district. In spite of all the preparations for the Phil-IRI post-tests, some pupils still remain in the frustration and instructional levels in silent and oral reading as well as in reading comprehension. Although a big improvement in the pupils reading performance could be observed in the post-test results compared to the results of the pre-test, there is need to find additional means or activities to lessen, if not totally eliminate the slow readers in the district. Furthermore, it was unclear as to which intervention strategy was most effective. There are also some practical considerations which high performing schools in the district can share with the low performing ones. To lessen, if not totally eliminate, the number or percentage of pupils who remain in the frustration level or non-readers, the following are

strongly recommended:

1. The low performing schools in the district should implement an intervention plan with proper financial support, monitoring and evaluation by the authorities concerned;

2. The District should set a uniform reading performance target for teachers to achieve; then, give rewards to those teachers who have successfully attained such target;

3. The general review should be conducted a day or two before the Phil-IRI test administration to bridge some gaps in learning reading;

4. The intervention strategies employed must be systematically assessed to see which strategy is most effective; and

5. Replication of this study should be done, in other districts of DepEd-Bulacan, to validate the results or findings of this research.

ACKNOWLEDGMENT

The authors wish to acknowledge and extend their sincere appreciation to: (1) the participants of this study especially to the Grade II public school pupils of DepEd-San Miguel North District, Bulacan, Philippines during the S.Y 2014–2015; (2) the Manuel V. Gallego Foundation Colleges, Inc., a private higher education institution (HEI) in Nueva Ecija, where the study was conceptualized; (3) Nueva Ecija University of Science and Technology (NEUST) and Department of Education-San Miguel North District, Bulacan for the encouragement that inspired the authors to publish the results of their study; and lastly, the authors would also like to extend their profoundest gratitude to all those who had, directly and indirectly, contributed in the completion of this noble undertaking.

REFERENCES

- [1] DepEd Memorandum Number 345 series of 2010. Maximum Utilization of the Philippine Informal Reading Inventory (Phil-IRI) Results to Improve Pupil Performance.
- [2] Graves, M., PM Broek, & B. Taylor (1996). The first R: Every child's right to read. New York: Teachers College Press; Newark, DE: International Reading Association.
- [3] McCombes, Shona (2019). Descriptive research. Retrieved on September 28, 2019 from <https://www.scribbr.com/methodology/descriptive-research/>
- [4] Morin, Amanda (2019). Understanding Response to Intervention. Retrieved on September 29, 2019 from <https://www.understood.org/en/school-learning/special-services/rti/understanding-response-to-intervention>
- [5] Phil-IRI Manual and User's Guide for School Users (DepEd, 2009). Retrieved on October 15, 2016 from <https://depedkoronadalcity.files.wordpress.com/2012/10/p-hil-iri-manual-and-users-guide-for-school-users.pdf>