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**PHONOLOGICAL SKILLS AND ITS IMPLICATIONS TO READING FLUENCY  
OF SELECTED GRADE 4-VENUS PUPILS OF TERESA ELEMENTARY  
SCHOOL**

An Action Research

Presented to

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Graduate School

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### **Abstract**

This action research explores the implications of phonological skills to the reading fluency of the grade four (4) learners. It was conducted at Teresa Elementary School, Teresa, Rizal during the last quarter of the school year 2019-2020. The study is a descriptive type of research. The data were collected through an adopted-modified questionnaire which was tested among other pupils of the said school to verify the reliability and applicability of the material. The participants of this research were the selected 18 grade four section Venus pupils.

After the data gathering and analysis, it was found out that there were differences in the mean scores of the learners in reference to their phonological skills. This means that phonological skills of the pupils are related to their reading fluency level. The study also revealed that pupils who have difficulties in their phonological skills tend to have a slower reading fluency.

Several tests were performed to maintain the veracity and reliability of this research. These relationships indicate that lower levels of syntactic awareness correspond to poor reading fluency and poor comprehension among these readers. These findings have important implications for research and instruction addressing the relative contributions of broader language skills to the development of reading among struggling readers.

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- **The Researcher**

## I. INTRODUCTION

Phonology is important to the acquisition of skilled reading, and limitations in phonological processing contribute to reading difficulties (Brady et al., 2011, Elliott and Grigorenko, 2014) as cited by (Li et.al, 2019).

Many children nowadays are having difficulties in reading. However, we will not be able to address this problem without first knowing the very specific difficulty that these children are having. Although a lack of phonemic awareness correlates with difficulty in acquiring reading skills, this lack should not necessarily be misconstrued as a disability (Fletcher et al., 1994). More importantly, children who lack phonemic awareness can be identified, and many of them improve their phonemic awareness with instruction. Thus, this study will explore more on the factors that affect the reading fluency of every learner.

Phonological awareness is the foundation for learning to read. It's the ability to recognize and work with sounds in spoken language. However, reading and its processes is also one of the underexplored skills in learning. Many of us think that reading is just teaching the kids the letters in the alphabets, pronouncing the vowels and consonants but little did we know that in teaching reading, it should follow a correct and systematic process. Just like when we are eating, we don't swallow the food before we chew it in our mouth.

Understanding the process of reading should start from the very basics as to the identifying learners' awareness about phonology down to the assessment of their phonological skills. Once we identify the level of their skills it would be a lot easier for us to remediate learners with reading difficulties.

An awareness of phonemes is necessary to grasp the alphabetic principle that underlies our system of written language. Specifically, developing readers must be sensitive to the internal structure of words in order to benefit from formal reading instruction (Adams, 1990; Liberman, Shankweiler, Fischer, & Carter, 1974). If children understand that words can be divided into individual phonemes and that phonemes can be blended into words, they are able to use letter-sound knowledge to read and build words. As a consequence of this relationship, phonological awareness in kindergarten is a strong predictor of later reading success (Ehri & Wilce, 1980, 1985; Liberman et al., 1974; Perfetti, Beck, Bell, & Hughes, 1987). Researchers have shown that this strong relationship between phonological awareness and reading success persists throughout school (Calfee, Lindamood, & Lindamood, 1973; Shankweiler et al., 1995).

Some kids pick it up naturally, but others need more help with it. Therefore, it is very important that teachers must know how and when to start teaching the kids how to read. There is ample evidence that phonological awareness training is beneficial for beginning readers starting as early as age 4 (e.g., Bradley & Bryant, 1985; Byrne & Fielding-Barnsley, 1991). In a review of phonological research, Smith et al. (1998) concluded that phonological awareness can be developed before reading and that it facilitates the subsequent acquisition of reading skills. Documented effective approaches to teaching phonological awareness generally include activities that are age appropriate and highly engaging. Instruction for 4-year-olds involves rhyming activities, whereas kindergarten and first-grade

instruction includes blending and segmenting of words into onset and rhyme, ultimately advancing to blending, segmenting, and deleting phonemes.

Fluency on the other hand is defined as the ability to read text with accuracy, appropriate rate, and good expression (NICHD, 2000). Fluency is necessary, but not sufficient\*, for understanding the meaning of text. When children read too slowly or haltingly, the text devolves into a broken string of words and/or phrases; it's a struggle just to remember what's been read, much less extract its meaning. So, it's important that teachers determine if their students' fluency is at a level appropriate for their grade.

Pursuant to Republic Acts 7743, an act promoting the moral and intellectual well-being of the people and aims to elevate the literacy level of every Filipino to the end that illiteracy is eradicated by the end of the century and R.A. 7165 an act creating the literacy coordinating council for the total eradication of illiteracy, Deped has initiated a policy called "Every Child a Reader Program" (Deped Order 45, S. 2002) which aims to promote the love of reading among all learners which in turn will enhance their literacy skills. This policy also encourages all school administrators to come up with any possible means to enable learners how to read.

Nowadays, public school teachers are being challenged of the increasing numbers of non-readers in their respective schools. In reference to the statistical data of the Local Government Unit of Teresa, it was bothersome that the number of illiterate individuals especially for ages 10 and above is rapidly increasing. Hence, it is the ultimate goal of this research study to find out what factors are

contributing to these problems and to somehow come up with a realistic solution to help the local government address this continuously growing social issue.

## **II. LITERATURE AND STUDIES**

The literature addresses the importance of phonological skills to the reading fluency of grade four (4) learners.

The authors report a systematic meta-analytic review of the relationships among 3 of the most widely studied measures of children's phonological skills (phonemic awareness, rime awareness, and verbal short-term memory) and children's word reading skills. The review included both extreme group studies and correlational studies with unselected samples (235 studies were included, and 995 effect sizes were calculated). Results from extreme group comparisons indicated that children with dyslexia show a large deficit on phonemic awareness in relation to typically developing children of the same age (pooled effect size estimate:  $-1.37$ ) and children matched on reading level (pooled effect size estimate:  $-0.57$ ). There were significantly smaller group deficits on both rime awareness and verbal short-term memory (pooled effect size estimates: rime skills in relation to age-matched controls,  $-0.93$ , and reading-level controls,  $-0.37$ ; verbal short-term memory skills in relation to age-matched controls,  $-0.71$ , and reading-level controls,  $-0.09$ ). Analyses of studies of unselected samples showed that phonemic awareness was the strongest correlate of individual differences in word reading ability and that this effect remained reliable after controlling for variations in both verbal short-term memory and rime awareness. These findings support the pivotal



role of phonemic awareness as a predictor of individual differences in reading development. We discuss whether such a relationship is a causal one and the implications of research in this area for current approaches to the teaching of reading and interventions for children with reading difficulties.

Less skilled fourth-grade readers performed lower than both chronological age and reading-level controls on the phonological oddity and pseudoword reading tests. Less skilled fourth-grade readers performed at the same level as skilled second-grade readers on a test of verbal working memory. Skilled fourth-grade readers scored higher than both other groups on this test. Correlational analyses were consistent with the view that phonological analysis skills contribute more strongly than verbal working memory skills to children's decoding abilities.

A 4-year longitudinal study was conducted to examine the relationship between Chinese children's phonological skills and their success in reading. Initially, 100 Hong Kong Chinese children were tested on visual and phonological skills at the age of 3, before they could read. The findings showed that pre reading phonological skills significantly predicted the children's reading performance in Chinese 2 and 3 years later, even after controlling for the effects of age, IQ, and mother's education. The main reason for this relationship is that phonological knowledge helps children to use the phonetic component in Chinese characters.

### **III. ACTION RESEARCH QUESTIONS**

This action research aims to enhance learners' phonemic awareness through the "Spot that Sound" game.

Specifically, this paper seeks to answer the following questions:

1. How does phonological skills affect reading fluency of grade four (4) section Venus pupils?
2. What is the major factor that affects the reading fluency of grade four (4) section Venus pupils?

#### **IV. SCOPE AND LIMITATIONS**

With the emerging studies related to reading processes, this study has explored on the implications of Phonological Skills such as; (1) word awareness; (2) Rhyme and alliteration awareness; (3) Syllable awareness; (4) Onset and rime manipulation (5) Phoneme awareness, to the learner's reading fluency. The study was conducted among selected Grade Four (4) section Venus pupils of Teresa Elementary School for the school year 2019-2020.

This study would also like to find out which factor has the biggest impact on the learners' reading fluency.

#### **V. RESEARCH AND METHODOLOGY**

Descriptive research method was maximized in the study. An adapted Quick Phonological Awareness Screening (Q-PAS) was used to measure the learners' phonological skills.

##### **A. Participants / Sources of Data and Information**

The participants in this study consisted of eighteen (n=18) fourth grade pupils enrolled in one of the public schools in the district of Teresa. The average age of the pupils was approximately nine- and one-half years.

Table 1.

*Description of Participants by Age, Sex and Reading Fluency*

	N	Age (years)			Sex		SD
		Minimum	Maximum	Mean	Male	Female	
<i>Fluent</i>	8	9.10	9.70	9.40	2	6	3.29
<i>Average</i>	6	9.11	12.00	10.56	3	3	4.26
<i>Slow</i>	4	9.20	9.90	9.55	2	2	4.14
<i>Readers</i>	18	9.14	10.53	9.84	7	11	1.57

The pupils were homogeneously grouped according to their reading fluency with respect to the Philippine Informal Reading Intervention (Phil-IRI) data conducted in the first semester of the school year 2019-2020.

## **B. Data Gathering Methods**

### **a. Data Collection**

All 18 pupils completed a set of assessment measures aimed at determining their phonological skills in relation to their oral reading fluency. The data were collected through an adopted-modified questionnaire called Quick Phonological Awareness Screening (Q-PAS).

The Q-PAS is designed for pupils in kindergarten through second grade, although it may also be used with older students who are experiencing difficulty developing phonological awareness. This informal assessment is designed to help the researchers detect learners who are at-risk for reading and spelling difficulties.

It has four (4) parts; (1) word awareness; (2) Rhyme awareness; (3) Syllable awareness; (4) Onset and rime manipulation (5) Phoneme awareness.

The participants' responses were then carefully checked by the researchers for statistical processing and analysis.

### **b. Ethical Issues**

For this research study to be successful, permission from the different authorities was acquired from the school head.

The data that were acquired from the participants was used for and only for this research study and shall be treated with utmost confidentiality.

After the conduct of the study, results were reported immediately to the school administration including the respondents to establish transparency and to collaborate on possible plans of actions.

### **c. Data Analysis**

Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data.

In terms of the pupil's Phonological Skills, their responses were gathered and coded for statistical purposes.

We analyzed the data obtained by using basic descriptive statistics, which provided a description of the subjects in terms of demographics including age, gender, and reading fluency. We used correlation analyses to determine whether pupils' phonological skills were related to their reading fluency.

## **C. Results**

Table 2 presents the descriptive statistics pertaining to the respondents' performance in the phonological skills assessment, covering five (5) areas, (1) word awareness; (2) rhyme awareness; (3) syllable awareness; (4) onset and rime manipulation and (5) phoneme awareness. It can be noticed that there was variability in the mean scores with respect to phonological skills.

Table 2

*Means and Standard Deviations for Pupils performance (N=18) on Word Awareness, Rhyme Awareness, Syllable Awareness, Onset and Rime Manipulation and Phone Awareness*

Predictor Variable	Slow		Average		Fluent		All Readers	
	Mean (SD)		Mean (SD)		Mean (SD)		Mean (SD)	
Word Awareness <sup>1</sup>	3.67	1.15	3.75	1.21	3.00	1.00	3.47	1.12
Rhyme Awareness <sup>2</sup>	2.33	0.58	3.33	0.98	5.00	0.00	3.56	0.52
Syllable Awareness <sup>3</sup>	2.00	1.00	3.92	1.08	5.00	0.00	3.64	0.69
Onset and Rime Manipulation <sup>4</sup>	3.00	1.00	3.42	1.31	4.00	1.00	3.47	1.10
Phoneme Awareness <sup>5</sup>	3.00	0.00	3.67	0.98	4.00	1.00	3.56	0.66

1. *Word Awareness.* Tracking the words in sentences.

2. *Rhyme and alliteration awareness.* Enjoying and reciting learned rhyming words or alliterative phrases in familiar storybooks or nursery rhymes.

3. *Syllable Awareness.* Counting, tapping, blending, or segmenting a word into syllables.

4. *Onset and rime manipulation.* The ability to produce a rhyming word depends on understanding that rhyming words have the same time. Recognizing a rhyme is much easier than producing a rhyme.

5. *Phoneme Awareness.* Identify and match the initial sounds in words, then the final and middle sounds (e.g., "Which picture begins with /m/?"; "Find another picture that ends in /r/").

Segment and produce the initial sound, then the final and middle sounds (e.g., "What sound does **zoo** start with?"; "Say the last sound in **milk**"; "Say the vowel sound in **rope**").

Blend sounds into words (e.g., "Listen: /f/ /ē/ /t/. Say it fast").

Segment the phonemes in two- or three-sound words, moving to four- and five-sound words as the student becomes proficient (e.g., "The word is **eyes**. Stretch and say the sounds: /ī/ /z/").

Manipulate phonemes by removing, adding, or substituting sounds (e.g., "Say **smoke** without the /m/").

Table 3 presents the results pertaining to whether pupils' phonological skills are significantly related to reading fluency. The results show that the higher the phonological skills awareness of the learner, the more fluent they get when it comes to reading. However, the poorer their phonological skills awareness the slower they get when reading.

Table 3  
*Correlation among word awareness, rhyme awareness, syllable awareness, onset and rime manipulation and phone awareness*

	Mean (WA)	Mean (RA)	Mean (SA)	Mean (ORM)	Mean (PA)
Reading Fluency Level	0.87796 2	1 0.80025			
Fluent	0.98967	8	1		
Average	0.96724 7	0.97072 5	0.92086 4	1	
	0.81150	0.99221	0.71935	0.93325	
Slow	9	5	1	7	1

We found that the pupils' phonological skills were significantly related to their reading fluency level; WA ( $r = .989$ ), RA (800), and SA (920). As predicted, we found that students who showed deficits in syntactic awareness performed poorly on measures of fluency. Conversely, we found that higher levels of syntactic awareness corresponded to higher levels of comprehension performance among these students. These findings support the view that poor phonological skills appear to have language processing difficulties encompassing awareness of the syntactic or

grammatical structure of the language. They indicate to us that students' syntactic awareness skills are closely related to their reading skills. As such, they are at odds with some prior research work, which has suggested that poor syntactic awareness may be a by-product of poor phonemic awareness skills (e.g., Smith, Macaruso, Shankweiler, & Crain, 1989).

Reading Fluency	Phonological Skills				
	Mean (WA)	Mean (RA)	Mean (SA)	Mean (ORM)	Mean (PA)
<i>Fluent</i>	3.88	3.63	4.00	3.25	4.00
<i>Average</i>	3.50	3.00	3.83	3.00	3.17
<i>Slow</i>	2.50	2.75	2.75	2.75	3.00

Table 4  
*Mean score difference on pupils' phonological skills; word awareness, rhyme awareness, syllable awareness, onset and rime manipulation and phone awareness*

SUMMARY					
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
3.875	2	6	3	0.5	
3.625	2	5.75	2.875	0.03125	
		6.58333	3.29166	0.58680	
4	2	3	7	6	
3.25	2	5.75	2.875	0.03125	
		6.16666	3.08333	0.01388	
4	2	7	3	9	

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
	0.24027		0.06006	0.25820		5.19216
Between Groups	8	4	9	9	0.893	8
	1.16319		0.23263			
Within Groups	4	5	9			
	1.40347					
Total	2	9				

Anova: Single Factor (a=.05)

## **VI. SUMMARY OF FINDINGS**

### **1. How does phonological skills affect reading fluency of grade four (4) section Venus pupils?**

It was evident in the results of the screening test that pupils who have difficulties in all the five (5) phonological skills namely; (1) Word awareness; (2) Rhyme awareness; (3) Syllable awareness; (4) Onset and Rime manipulation; and (5) Phoneme awareness have slower fluency in reading. However, those who are fluent readers tend to have high scores under the five (5) phonological skills. Therefore, phonological skills really impact the reading fluency of the grade four (4) learners.

To test whether there is a significant difference in the means of phonological skills and each of its subsets, a one-way analysis of variance (ANOVA) was used.

This test revealed that the critical value is 5.19 and is much higher than the level of difference of 0.26. So, it is very clear that there were differences in the mean scores of the three groups of readers (slow, average and fluent) as far as phonological skills are concerned. Therefore, the null hypothesis stating that there is no significant difference in means of the three groups of readers is rejected. We have statistically significant evidence at  $\alpha=0.05$  to show that there are differences in the mean scores of the three groups of readers.



## 2. What is the major factor that affects the reading fluency of grade four (4) section Venus pupils?

Based on the mean scores below, it can easily be assumed that the major factor that affects learners' reading fluency is Word Awareness (WA). In a study conducted by Thompson, B.H & Mokhtari, K., (2010) on "How problems of reading fluency and comprehension are related to difficulties in syntactic awareness skills among fifth graders" revealed that lower levels of syntactic awareness correspond to poor reading fluency and poor comprehension among these readers.

Reading Fluency	Phonological Skills				
	Mean (WA)	Mean (RA)	Mean (SA)	Mean (ORM)	Mean (PA)
<i>Fluent</i>	3.88	3.63	4.00	3.25	4.00
<i>Average</i>	3.50	3.00	3.83	3.00	3.17
<i>Slow</i>	2.50	2.75	2.75	2.75	3.00

### A. CONCLUSIONS

In this study, we assessed and analyzed eighteen 4th grade pupils' phonological skills and its relation to their reading fluency level (i.e., slow, average, fluent), an aspect of reading whose relevance in relation to phonological skills have not been well documented in prior research. The aim was to examine the role of phonological skills as a potential source of reading fluency for these readers. We found that the pupils' reading fluency level is dependent on their phonological skills WA ( $r = .989$ ), RA (800), and SA (920). These relationships indicate that lower levels of syntactic awareness correspond to poor reading fluency and poor comprehension

among these readers. These findings have important implications for research and instruction addressing the relative contributions of broader language skills to the development of reading fluency and comprehension among struggling readers.

## **B. RECOMMENDATIONS**

From the conclusions drawn, the following recommendations are hereby recommended.

As researchers, we are fully aware of the constraint of the findings, hence future studies are highly encouraged to complete a series of individual, small and large group investigations aimed at systematically studying the nature of this relationship.

Findings of this study and other research studies is very significant not only for the school administrators and curriculum planners to design effective ways to assess and remediate learners with reading difficulties but also for learners who are trying their best to cope with the education requirements.

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