Effectiveness of Syllable-Based Reading Materials in Improving the Word Recognition of Kindergarten Learners

IRENE F. PADILLA-LAMBONAO
Teacher III
Western Leyte College
Master of Arts in Education
Major in Elementary Education
irene.padilla@deped.gov.ph

Abstract —To strengthen the reading proficiency of every learner and help nurture a culture of reading which considered a requisite skill in all content areas, DepEd announced the "Hamon: Bawa't Bata Bumasa" (3Bs) initiative. In the implementation of the program, the kindergarten learners should acquire the pre-requisite skills so that it will be easy for them to learn to read and understand what they read. It is in this premise that the researcher decided to conduct this study to evaluate the effectiveness of syllable-based reading materials in improving the word recognition of kindergarten learners. A quasi-experimental research design employing pre-test and post-test Early Grade Reading Assessment (EGRA) tools and utilizing the syllable-based reading materials crafted by the researcher, aided in the successful conduct of the study. Simple percentage and t-test of mean difference were the statistical tools used to interpret the result of the study. The study revealed a significant difference in the performances of the kindergarten learners on word recognition before and after the utilization of syllable-based reading materials in teaching literacy skills. The intervention materials provided to the learners, the content and design of the materials motivate the learners to do the tasks and activities provided in the materials and the way the teachers use the reading materials and her strategies in teaching also contributes to the attainment of identifying the kindergarten learners as transitional levels. Thus, syllable-based reading materials are effective learning materials in improving the word recognition skills of kindergarten learners.

Keywords — Effectiveness, Syllable-Based Reading Materials, Word Recognition, Kindergarten Learners

I. Introduction

Reading is the most important skill to be acquired by a child. Recognizing written words and understanding written texts are among the most important competencies children need to acquire in primary school. Kindergarten stage is the most crucial stage for this is the foundation of learning. Teachers in this grade level must be creative in providing learning which is interesting and motivating to the child. Learning phonics, phonemics and phonological awareness should be emphasized and correctly taught. That is why kindergarten teachers must be active and resourceful in creating instructional materials which will suit the interests and needs of the child.

As we all know, early literacy begins to develop the moment the child is born. Parents and caregivers lay the foundation for children's reading success in infancy, as babies learn to recognize the sounds in their language and identify words within the speech stream. Practices such as reading books with babies, singing songs, drawing, and pointing out letters are important beginning steps in literacy development.

Formal early literacy instruction typically begins in pre-kindergarten and kindergarten. Early literacy instruction includes teaching decoding (working with letters and sounds), comprehension (understanding stories and informational texts, background knowledge), and oral language (vocabulary and sentence structure).

Some believe that pre-kindergarten or kindergarten should be purely child-led and play-focused, without explicit attention paid to literacy skills. However, failing to plan and intentionally teach literacy skills in pre-kindergarten can widen achievement gaps between children living in poverty and their economical advantaged peers. Literacy instruction should always be developmentally appropriate, engaging, and implemented in meaningful contexts like shared book-reading and play. As an educator has said, "kindergarten classes are noisy, classroom is full of reading materials, toys and other manipulative materials where they can interact with it and learn new things from it". On the other hand, if kindergarten classroom is so silent, the teacher is not doing something or not teaching at all.

In teaching word recognition, kindergarten teachers must be innovative in creating learning materials for the pupils which will be utilized by them during the lesson. Teachers have to create colorful, differentiated and varied learning materials to develop the interest fo the child in learning. One of the reading materials that the researcher had been using in teaching word recognition is the syllable-based reading materials. In using this material, pupils will be interested and motivated to read. In years of being a kindergarten teacher, the researcher is confident of using this material for it helps improve the reading interest of the learners and good reading performance was attained after the child finishes the grade.

The accuracy of word recognition for children learning to read is already close to ceiling at the end of Grade 1. Even poor readers manage to read a large proportion of regular (pseudo) words accurately at this point (Huemer, Landerl, Aro, & Lyytinen, 2008; Landerl & Wimmer,

2008), but huge individual differences in the efficiency of word recognition persist throughout primary school (Richter, Isberner, Naumann, & Kutzner, 2012; Landerl & Wimmer, 2008). Given the transparency of Philippine orthography, children can translate each letter of a (pseudo) word into a spoken representation by applying grapheme-phoneme correspondence rules and by blending them into a phonological representation (phonological recoding). A more efficient way to read words is by recognizing syllables that are holistically translated into phonological representations. Ehri (2005) coined the term consolidated alphabetic phase for the phase of reading development that follows the full alphabetic phase in which grapheme-phoneme connections are formed. This consolidated alphabetic phase is characterized by reliance on "letter sequences that symbolize blends of graph phonemic units" (Ehri, 2014), which most often are syllables (or components of syllables, such as frequent multi-letter onsets and rhymes). According to this theory, the consolidated alphabetic phase replaces the full alphabetic phase and is a regular phase in word reading development. Syllable-based phonological recoding changes into the use of morphemes and then eventually into the use of orthographic word forms for word recognition (i.e., word recognition by lexical access) after children have encountered words through reading practice. Thus, the recognition of (sub) lexical units serves as a bridge between the slow phonological recording and the faster direct recognition of whole words.

When learning to read, the syllable is likely to be crucial for helping children to make the first step towards holistic word reading in Grade 2, whereas morphemes might become more relevant in Grade 4 (Hasenhäcker & Schroeder, 2017). Successful developing readers can thereby recognize an increasing number of words directly and efficiently by mapping (sub) lexical units or whole word forms directly onto their lexical entry to gain faster access to word meanings (meaning access). These activities must be coupled with reading materials which will boost the interest of the child in learning to read. Thus, it is in this premise that the researcher decided to conduct this study to evaluate the effectiveness of syllable-based reading materials in improving the word recognition skills of kindergarten learners. A proposed improvement plan will be formulated based on the findings of the study.

It is in the rationale that the researcher who is currently a kindergarten teacher in the above mentioned local, would like to delve worthy research undertaking that will benefit herself, the school she is currently teaching and that of her Graduate Program she is enrolled at.

This study evaluates the effectiveness of syllable-based reading materials in improving the word recognition skills of kindergarten learners of Rizal Elementary School, Kananga 1 District, Leyte Division for School Year 2022-2023. The findings of the study were the basis for the proposed improvement plan.

Specifically, this study sought to answer the following questions:

1. What is the performance of kindergarten learners in word recognition before the utilization of syllable-based reading materials?

2. What is the performance of kindergarten learners in word recognition after the utilization of syllable-based reading materials?

3. Is there a significant difference in the performances of kindergarten learners in word recognition before and after the utilization of syllable-based reading materials?

4. What improvement plan can be proposed based on the findings of this study?

II.   Methodology

Design. This study employed the quasi-experimental research design utilizing the pre-test and post-test to evaluate the effectiveness of syllable-based reading materials in improving the word recognition skills of kindergarten learners for School Year 2022-2023. Rizal Elementary School, Kananga 1 District, Leyte Division is the main locale of the study. The 23 kindergarten learners enrolled in the said locale for School Year 2022-2023 are the main respondents of the study. The Early Grade Reading Assessment (EGRA) of the Department of Education (DepEd) employs the Early Grade Reading Assessment (EGRA) as a tool to evaluate the reading ability of students in the early grades. A student's ability to read fluently, comprehend what they have read, and successfully convey their information is assessed on the EGRA, a standardized reading test. There are 5 key components of early grades that EGRA measure. These are alphabetic principles, phonemic awareness, vocabulary, fluency, and comprehension. The alphabetic principle includes letter name identification, letter sound identification, syllable reading, nonword decoding and dictation. Moreover, the skills measures under phonemic awareness is the initial sound identification and phoneme segmentation. For fluency it is the oral reading fluency is measured while on vocabulary, oral vocabulary, reading comprehension and listening comprehension. Lastly for comprehension, reading and listening comprehension is measured. The learner can be classified as Independent if the score is 90-100, Transitional for 75-89 and Emergent for 74 and below. This instrument is based on DepEd Order No. 57, series 2015, Utilization of Early Grade Reading Assessment (EGRA) and Early Grade Math Assessment (EGMA) Tools for System Assessment. This material is used to measure the pre-test and post-test literacy performance of the kindergarten pupils. Lesson plans in teaching word recognition skills utilizing syllable-based reading materials was also prepared. Syllable-based reading materials are manipulative materials to be used in teaching word recognition skills like drumming out syllables, marker activity, multisyllabic manipulation and jumping syllables. These materials must be present in the lesson plan of the teacher. A matrix of activities was crafted to guide the teacher-researcher the flow of her study. This research focused on evaluating the effectiveness of syllable-based reading materials in improving the word recognition skills of kindergarten learners through the pre-test and post-test and its significant difference. A Proposed Improvement Plan based on the findings of the study is the output.

Sampling. There are 23 kindergarten learners involved in this study. The research instruments were administered face-to-face with consent from the Local IATF and strictly following the prescribed Health Protocol during the face-to-face classes.

Research Procedure. The researcher prepared the research design and tools utilized in the study. Approval and recommendation from the Panel of Examiner of the Graduate Studies was sought. A letter request to conduct this study was forwarded to the Office of the Schools Division Superintendent. Upon approval, permission from the District Supervisor and School Head was secured before the actual gathering of data. Orientation of the participants and administration of the pre-test was done face-to-face after the approval of the permit from the parents of the respondents. After accomplishing the pre-test, intervention was given within four weeks. The utilization of syllable-based reading materials to improve word recognition skills of the kindergarten learners was emphasized in the study. After the four-week intervention, the post-test was administered. Results of the tests were collected. Data were tallied and submitted for statistical treatment. Analysis and Interpretation of Data. Making of Proposed Improvement Plan followed.

Ethical Issues. The researcher properly secured the permission to conduct the study from the authorities through written communication. In the formulation of the intervention materials that was used in the study, the use of offensive, discriminatory, or other unacceptable language was avoided. The respondents' names and other personal data were not included in this study to protect their privacy. Participation of the respondents was also voluntary. Orientation was conducted for the respondents with their parents. In the orientation, issues and concerns were addressed and consent to be included in the study were signed. The researcher-maintained objectivity in analyzing and discussing the results. All authors whose works were mentioned in this study were properly quoted and were acknowledged in the reference.

Treatment of Data. Simple Percentage was employed to evaluate the performance of kindergarten learners in word recognition before and after the utilization of syllable-based reading material. **t-Test of Mean Difference** was used to determine the significant difference in the performances of kindergarten learners in word recognition.

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III. Results and Discussion

Table 1
Performance of Kindergarten Learners in Word Recognition
Before the Intervention

Score Range	Description	PRETEST	
		Frequency	%
90-100	Independent	0	0
75-89	Instructional	11	48
74 & below	Emergent	12	52
Total		23	100
Weighted Mean		70.52	Emergent

Table 1 presents the performance of the kindergarten learners in word recognition before the utilization of syllable-based reading materials. It was revealed on the table that among the 23 kindergarten learners tested, 11 or 48% got a score of 75-89 in word recognition. This means that they are at the transitional level as interpreted by the Early Grade Reading Assessment (EGRA) guidelines. Transitional level refers to the specific stage in the reading proficiency where learners demonstrate improved reading skills wherein, they begin to employ reading or decoding unfamiliar words and they use it as an aid in understanding what the word means. This implies that these learners have already acquired phonological awareness, or they already know the sounds of the letters of the alphabet. Moreover, it was shown on the table that 12 or 52% got the score of 74 and below. This means that these group of learners are in the emergent level of proficiency in reading. In the Early Grade Reading Assessment (EGRA) guidelines, emergent level refers to the stage of reading development where learners are beginning to acquire the foundational skills in reading. They are learning to recognize and understand the connections between spoken and written language, or they possess the ability to recognize different combinations of phonemes in word structures that are constructed based on alphabetic principles (Wright & Jacobs, 2003; Guldenoglu, 2016). Finally, the table shows that the performance of the kindergarten learners in word recognition before the utilization of syllable-based reading materials has an average mean of 70.52 which is interpreted as emergent. This means that kindergarten learners need reading intervention to focus on reading. This implies that teachers must provide more activities and integrate strategies and techniques which will motivate the learners to work more and learn to bridge single-letter phonological reading or learn to blend the sound to form a word.

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Table 2
Performance of Kindergarten Learners in Word Recognition
After the Intervention

Score Range	Description	PRETEST	
		Frequency	%
90-100	Independent	16	70
75-89	Transitional	7	30
74 & below	Emergent	0	0
Total		23	100
Weighted Mean		86.65	Transitional

Table 2 presents the performance of kindergarten learners in word recognition after the utilization of syllable-based reading materials in teaching literacy skills. It was revealed on the table that among the 23 kindergarten learners, 16 or 70% got a score of 90-100 which is interpreted as independent. This means that these group of learners can recognize words using the sounds of the letters after utilizing the syllable-based reading materials. This implies that these kindergarten learners have acquired the skills in blending the sound to produce words. The syllable-based reading materials and the appropriate reading instructions provided by the researcher in teaching allow the learners to explore and learn to recognize the words fluently. In a study by Huemer, Aro, Landerl, and Lyttinen (2008), a repeated reading intervention of high-frequency, word-initial consonant clusters with a vowel ending that partly corresponded with syllables improved reading speed and reading accuracy of words that included the practiced sub lexical items for poor-reading second and fourth graders.

Further, it was also shown on the table that there are still 7 or 30% of the 23 kindergarten learners got the score of 75-89 which is identified as transitional reading level. This means that using syllable-based reading materials provided by the kindergarten teacher, their performance has improved, and they were able to recognize the words by reading it through syllables. This implies that these learners have acquired the basic knowledge in phonemes and try to connect the sound to form the words. Enhancement activities will be provided to the learners to help them achieve their desired performance level.

Based on the result of the post-test the table shows a weighted mean of 86.65 which is interpreted as transitional. This means that the learners demonstrate improved reading skills after utilizing the syllable-based reading materials. This implies that these learners begin to employ strategies in decoding unfamiliar words through syllable reading and use this as an aid in understanding the word recognized by them. This implies further that these learners are ready to engage in more activities in word recognition for they already master the phonemes. Providing syllable-based reading materials is important to help the learners acquire the basic skills in reading.

According to Galuschka, Ise, Krick, & Schulte-Körne, (2014), a word recognition intervention should convey association rules between graphemes and phonemes and spelling patterns to stress the alphabetic principle as well as components of repeated reading of syllables and words.

Table 3

Test of Difference Between in the Performance of Kindergarten Learners in Word Recognition Before & After the Intervention

Aspects	Test Scores		Computed T	Critical T	Decision	Interpretation
Performance of Kindergarten Learners	Pre Post	70.52 86.65	1.142	0.941	Reject H$_o$	Significant

Table 3 presents the test of difference between the performance of the kindergarten learners in word recognition before and after the utilization of syllable-based reading materials in teaching word recognition skills. It was revealed on the table that based on statistical bases and analyses of which degrees of freedom were composed of 23 kindergarten learners. The level of significance is at 0.05 or the rejection level while the t-critical value is 0.941 from t-distribution. Based on the data presented the computed value is 1.142 which means null hypothesis is being rejected. Since the computed value is higher than the critical value it means that there is a significant difference in the performances of the kindergarten learners on word recognition before and after the utilization of syllable-based reading materials in teaching literacy skills. This implies that the syllable-based reading materials are effective in assisting the learners to learn to recognize words. Moreover, the content and design of the materials motivate the learners to do the tasks and activities provided in the materials. The way the teachers use the reading materials and her strategies used in teaching also contributes to the attainment of identifying the kindergarten learners as transitional levels.

IV.   Conclusion

The study revealed a significant difference in the performances of the kindergarten learners on word recognition before and after the utilization of syllable-based reading materials in teaching literacy skills. The intervention materials provided to the learners, the content and design of the materials motivate the learners to do the tasks and activities provided in the materials and the way the teachers use the reading materials and her strategies in teaching also contributes to the attainment of identifying the kindergarten learners as transitional levels. Thus, syllable-based reading materials are effective learning materials in improving the word recognition skills of kindergarten learners.

V.   Recommendations

1. The proposed improvement plan formulated should be utilized.
2. Teachers should utilize the teacher-made syllable-based reading materials crafted by the researcher for it was proven to be effective.
3. Teachers should learn to craft syllable-based reading materials which can be utilized by them during the teaching of word recognition skills in kindergarten.
4. Teachers should provide varied, differentiated, and colorful reading materials to improve the word recognition skills of kindergarten learners.
5. Teachers must attend training or LAC sessions on the construction and utilization of syllable-based reading materials during the teaching-learning process.
6. School Heads should allocate the budget for the procurement of materials to be used in the production and construction of syllable-based reading materials.
7. School Heads should spearhead in the crafting of training design and LAC plan for trainings and LAC sessions for the improvement of teaching-learning process of teachers most especially in the improvement of learning resource materials in teaching word recognition skills.
8. School Heads should identify possible resource people who can share their expertise in the formulation and construction of syllable-based reading materials.
9. School Heads should provide technical assistance to teachers in terms of teaching word recognition skills.
10. School Heads should regularly monitor the teaching-learning process of teachers.
11. School Heads should maximize the time in providing appropriate technical assistance based on the needs of the teachers in teaching word recognition skills.
12. School Heads should submit the crafted syllable-based reading materials for quality assurance.
13. School Heads should encourage and provide technical assistance for the crafting of innovations and research based on the intervention provided to improve the performance of the pupils; and
14. Future researchers should replicate this study to include different locales and include different variables aside from the mentioned in this study.

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AUTHOR'S PROFILE

MS. IRENE F. PADILLA-LAMBONAO

The author is Miss Irene F. Padilla-Lambonao. She was born on September 27,1992 at Brgy. Plaridel, Palompon,Leyte. She was married for 2 years to Mr. Jumar F. Lambonao .She is presently residing at Brgy.Rizal, Kananga,Leyte. She finished her elementary education at Plaridel Elementary School, Brgy. Plaridel, Palompon, Leyte in the year 1999-2005 and continue her quest for education and able to finish her secondary education at Cantuhaon National High School, Brgy. Cantuhaon, Palompon, Leyte in the year 2005-2009. She enrolled and finished her Bachelor in Science in Home Technology Education major in Home Economics at Palompon Institute of Technology (PIT) in the year 2009-2013. She took up Master of Arts in Education major in Elementary Education at Western Leyte College of Ormoc City, Inc.

After she graduated her bachelor's degree, she take her Board exam year 2013. In the year 2014 she was hired as a substitute teacher at Parilla Elementary School Palo,Leyte. Then, following year 2015 she was hired as a Permanent teacher in DepEd taught grade 3 in 1 year and following year she taught grade 1 at Mahawan Elementary School Kananga Leyte. After 3 years in Mahawan Elementary School Kananga,Leyte she was transferred to another station at Rizal Elementary School ,Kananga, Leyte and handled Kindergarten in 5 years up to present. She also attended series of webinars/seminars and trainings to increase her professional growth as a teacher.