



RESEARCH ARTICLE

PHONEMIC AWARENESS AND NUMERACY SKILLS IN ORAL READING OF SIBOL
LEARNERS: BASIS FOR AN EXTENSION PROGRAM

*Ma. Betty P. Decin

Jose Rizal Memorial State University-Katipunan Campus, Katipunan, Zamboanga Del Norte, Philippines

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ABSTRACT

Phonemic awareness is the ability to hear, identify, and manipulate individual sounds-phonemes in spoken words. Before children learn to read print, they need to become more aware of how the sounds in words work. Numeracy complements literacy and is sometimes called “mathematical literacy”. It is the ability to reason and to apply simple numerical concepts. Sibol is one of the seven Gawad Kalinga programs centered on Child Youth and Development. It provides value based education for pre-school children, ages 3 to 6 years old through its program called SIBOL, which means “to grow” in the Filipino language. The study aimed to determine the level of Phonemic awareness and numeracy skills of 30 Sibol learners– Miatan Subanen Community of the school year 2014-2015. ANOVA was used to determine the significant difference among the Sibol learners’ skills in oral reading readiness indicator and t-test to determine the significant difference between the male and female oral reading skills. Male and female Sibol learners were Less Skillful in Oral Reading Readiness both in Phonemic and Numeric Skills with respect to different indicators. It has been realized that there is a significant and noticeable difficulty of these identified learners in terms of oral reading activity.

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INTRODUCTION

Phonemic awareness is the ability to hear, identify, and manipulate individual sounds-phonemes in spoken words. Before children learn to read print, they need to become more aware of how the sounds in words work. They must understand that words are made up of speech sounds, or *phonemes*. It is the only aspect of reading that is essential for children to develop before they can begin learning to read. Based in oral language, phonemic awareness serves as not only the foundation for reading it is also the strongest indicator of a child’s potential for learning to read. Numeracy complements literacy and is sometimes called “mathematical literacy”. It is the ability to reason and to apply simple numerical concepts. The foundation for Gawad Kalinga was laid on December 26, 1995, when lay Catholic community Couples for Christ held a Youth Camp for gang members and juvenile delinquents in Bagong Silang, Caloocan City, the largest slum area in the Philippines. The program was organized by CFC – Youth for Christ. The name "Gawad Kalinga", which was translated in the Filipino language either as "to give care" or "to award care," was coined in 2000. The first GK Expo was launched on October 4, 2003 in Fort Bonifacio, Taguig City.

Sibol is one of the seven GK programs centered on Child and Youth Development. It provides value based education for pre-school children, ages 3 to 6 years old through its program called SIBOL, which means “to grow” in the Filipino language. The GK Sibol Program as a Community Extension Service of the College of Education of Jose Rizal Memorial State University-Katipunan Campus is a community – based curriculum, which focused on the literacy of the Sibol learners. Literacy has traditionally been described as the ability to read and write. It is a concept claimed and defined by a range of different theoretical fields. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defined literacy as the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involved a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society. In modern context, the word literacy means reading and writing in a level adequate for written communication and generally a level that enabled one to successfully function at certain levels of a society. Numeracy is the ability to count and do arithmetic. Literacy can act as a window, opening one's view to the world.

Corresponding author: Ma. Betty P. Decin

Jose Rizal Memorial State University-Katipunan Campus, Katipunan, Zamboanga Del Norte, Philippines.

The Sibol literacy program of Barangay Miatan focused both on providing effective classroom instruction and curriculum for the instructors handling the program and on assisting Sibol pupils in their reading skill acquisition and progress which will develop the full potential and cater to the intellectual needs. It is also hoped that through this program, educators can confront the problem of illiteracy and meet pupil's special needs in reading and by providing necessary materials, which enhance teaching-learning and the on-going professional development of teachers.

Theoretical Framework

This study was largely premised on the socio cultural theory on literacy development by Lev Vygotsky (2002) and the family literacy theory of (St. Pierre, Ricciuti, Tao., 2005). Socio cultural theory acknowledged that the individual was only one factor influencing learning and/or achievement. The theory encouraged us to consider the ecology of human development as well. In terms of literacy learning, this ecology included factors outside of the child, such as school characteristics, learning environments, class activities, parental input, instructional characteristics and the student's imaginative world. Thus, socio cultural theory suggested that any true understanding of learning extended beyond a child's innate abilities to these factors. This idea recently has become more popular as family functioning and community context have emerged as critical issues for children. Learning to read and write was mediated by a child's guided participation in literate activities, wherein they began to adopt the patterns of use represented within their culture. Cultural patterns of use for reading and writing activities were seen as a tool for acquiring these skills.

METHODOLOGY

This study utilized the GK-Sibol Learners of Barangay Miatan, Katipunan, Zamboanga del Norte of school year 2014-2015. The researchers used the population size and non-probability sampling technique, specifically accidental sampling, which was applied to those who were able to take, in consideration to their availability at the time that the data gathering procedure was conducted. There were only 30 pupils enrolled in Kindergarten and all of them were the children of 4Ps (Pantawid Pamilyang Pilipino Program) beneficiaries. The researchers used the rating scales from 5-1, which has Qualitative Description such as: Very Skillful with the rating scale of 5; Much Skillful with the rating scale of 4; Skillful with the rating scale of 3; Less Skillful with the rating scale of 2; and Not Skillful with the rating scale of 1.

This study used oral questionnaires, which was anchored on the following bases: (a) Phonemic Awareness Skills and (b) Numeracy Skills. Prior to the administration of the said assessment, pre-conducted oral reading activities were done. From there, the researchers then identified the competencies of the learners in terms of the enumerated bases. ANOVA was to determine the significant difference among the Sibol learners' skills in oral reading readiness indicator and t-test to determine the significant difference between the male and female Sibol learners' oral reading skills. This investigation sought to find out the level of skills of Sibol learners in Gawad Kalinga – Subanen Community in the realization of the effective literacy program. It assessed and identified the literacy needs of Sibol pupils at GK Miatan, Katipunan, Zamboanga del Norte.

Criteria used were oral readiness, cognitive development, and psychosocial development of the learners. Indicators were used to determine the level of skills in oral reading of the pupils based on one's competence in producing the sounds of letters, matching the sounds to its corresponding letters, discriminating the sound of each letter in the alphabet, identifying the upper and lower case letters, naming most letters of the alphabet, producing the sounds of letters, picking out the letters that were the same or different, reading words by sight and reading CVC (consonant-vowel-consonant) words and recognizing numbers 0-20, reading a whole number from 0-20, and determining the number that was one larger than a given number within 20. The Sibol Literacy Program included the nature, structure and mechanism of implementation, which addressed the identified needs of the Sibol learners. Outcomes were acknowledged through the programs contribution to the Sibol learners, teachers, parents and the students of JRMSU-K, College of Education.

Scoring. The 25-item test was divided into five levels of students' skills in reading and the following scores were interpreted as follows:

Scores	Mean	Qualitative Description		
21-25	90-100%	4.21-5.00	Advanced	Very Much Skillful
16-20	85-89%	3.41-4.20	Proficient	Much Skillful
11-15	80-84%	2.61-3.40	Approaching Proficiency	Skillful
6-10	75-79	1.81-2.60	Developing	Less Skillful
0-5	74 below	1.00-1.80	Beginning	Not Skillful

RESULTS AND DISCUSSION

Table 1 reflects that there were 14 male and 16 female officially enrolled in Kindergarten in Barangay Miatan, Katipunan Zamboanga del Norte.

Table 1. Profile of Respondents

Sex	Age				Religion
	3yrs	4 yrs	5 yrs	6 yrs	
14 Male	4	5	3	3	14 R.C.
16 Female	5	4	2	4	16 R.C.

They are 3-6 years old and they are all Roman Catholic. Although in 1993 and 1999 young girls were significantly more likely than young boys to achieve in all measures, by 2007 most gender disparities were non-significant, except for the ability to write one's name. In 2007, 64 percent of pre-kindergarten girls ages three to 4 could write their first name, compared with 56 percent of their male peers. As expected, the percentage of young children displaying these school readiness skills increased with age. In 2007, 17 percent of three-year-olds could recognize letters, 47 percent could count to 20 or more, 34 percent could write their names, and two percent could read words, compared to 59, 85, 89, and 23 percent, respectively, for five- to six-year-old children. The reading readiness view was based on the belief that there are certain sets of skills that children can be taught that led to success in literacy, and that these skills developed in children at about the same age. According to this view of literacy development, literacy instruction began when a child entered primary school and success depended on the child's individual cognitive abilities (Nolen, 2001; Razfar & Guitierrez, 2003). Literacy is

largely a visual skill that can be taught through explicit instruction and requires practice in the skill set in order to develop (Xue & Meisels, 2004). Furthermore, literacy development is hierarchical in nature with skills being taught in sequence and building on one another (Xue & Meisels, 2004). Literacy skills are taught at the same time and at the same pace to all of the children in a group (Xue & Meisels, 2004).

The Schematic Diagram

Table 2 shows that the Phonemic awareness reading readiness indicator has a grand total weighted mean of 2.55 with a qualitative description of less skillful (developing) and the numeracy skills has a grand total weighted mean of 2.21, less skillful. This implied that both male and female phonemic awareness and numeracy skills have equal Qualitative Description that is less skillful. Based on our survey, Kindergarten in Barangay Miatan, Katipunan, Zamboanga del Norte were "less skillful" in language skills because most of them did not know how to use language to communicate with others and could not speak clearly to be understood by others.

findings on reading instruction. Phonemic awareness meta-analysis found that phonemic awareness teaching leads to gains in phonetics, reading, and spelling. Instruction is most beneficial when oral language changeover is quickly followed by letter usage, when there are few lesson activities, and when classes are small. In Table 3, the reading readiness indicator Naming Most Letters of the Alphabet is the only indicator that obtained a mean of 3.41 with a qualitative description of "much skillful" and followed by Matching the Sounds to its Corresponding Letters obtained a mean of 2.70 and Identifying the Upper and Lower case Letters with the mean of 3.13 with a description of "Skillful." Next is the "less skillful" indicators such as Picking out the letters that is the same or different (2.56), Discriminating the Sound of Each Letter in the Alphabet (2.40), Reading Words by Sight (2.20), and Reading CVC Words (2.35). Last is not skillful indicator the Producing the Sounds of Letters (1.61). The grand total mean obtained under the phonemic awareness skill is 2.55 with a qualitative description of "less skillful." Al Otaiba and Fuchs (2002) found that phonological awareness programs are usually beneficial and most effective when reading and writing are overtly included.

Table 2. Reading Readiness Indicators

FACTORS	Gender	WEIGHTED MEAN	QUALITATIVE DESCRIPTION	Computed t	Critical t @ 5%
Phonemic Awareness	Male	2.33	Less skillful	2.56	1.833
	Female	2.58	Less skillful		
Grand Total		2.55	Less skillful		
Numeracy Skills	Male	1.80	Less skillful	2.22	1.833
	Female	2.61	Skillful		
Grand Total		2.21	Less skillful		

*df=9

Table 3. Levels of Phonemic Awareness Skills

Phonemic Awareness skills	Mean	Description
Naming most letters of the alphabet.	3.41	Much Skillful
Producing the Sounds of Letters	1.61	Not Skillful
Matching the Sounds to its Corresponding Letters	2.70	Skillful
Picking out the letters that is the same or different	2.56	Less Skillful
Discriminating the Sound of Each Letter in the Alphabet	2.40	Less Skillful
Identifying the Upper and Lower case Letters	3.13	Skillful
Reading Words by Sight	2.20	Less Skillful
Reading CVC Words	2.35	Less Skillful
Grand Total	2.55	Less Skillful

Table 4. Levels of Numeracy Skills

Numeracy skills	Mean	Description
Recognizing numbers 0-20	2.47	Less Skillful
Reading a whole number from 0-20	2.28	Less Skillful
Determining the number that is one larger than a given number within 20	1.89	Less Skillful
Grand Total	2.21	Less Skillful

Table 5. ANOVA of the Sibol learners' skills in Oral reading readiness when they are categorized according to age

Source of Variations	df	Sum of squares	Mean of sum squares	F-computed	F-critical @ 5%	Decision
BSS	3	12.9117	4.3039	1.8126	2.92	Accept Ho
WSS	32	75.9822	2.3744			
TSS	35	88.8939				

In terms of literacy and pre-reading, they were "less skillful" because according to Mrs. Maribel Gumanas, the daycare teacher, most of them were not interested to learn and most of them were always absent. That is why their literacy and pre-reading resulted to "less skillful." Foorman & Moats (2004) provide the National Reading Panel report (NRP, 2000)

But 30% of at-risk readers and 50% of special needs children do not necessarily gain from phonological and decoding instruction. Nevertheless, it is hard to ignore the research on the importance of phonological awareness. Table 4 presents the Level of Numeracy Skills. The mean obtained by the following indicators such as Recognizing numbers 0-20 is

2.47, Reading a whole number from 0-20 is 2.24, and Determining the number that is one larger than a given number within 20 is 1.85 all have equal qualitative description of "less skillful/developing." Reading problems continued into adulthood, and successful readers were more likely to graduate and find work. Foorman (2004) supported early intervention in Grades 1 to 2 as it is more effective than. If left unchecked, intervention required more time and effort. Early intervention from K to Grade 2 is of prime importance. From a developmental standpoint, preschool to Grade 1 is the most opportune time to teach reading and to get intervention if necessary. D'Arcangelo (2003) interviewed Shaywitz and wrote that between the ages of 4 to 6, the brain is reducing, shutting, or reinforcing synapses, the connections between brain cells. At this age, the brain is more able to "clarify" information than at later stages of development. When young children begin reading, pathways do not have to be disconnected. Three parts of the brain are used for reading. Poor readers have interference in the posterior part of the brain that is not resolved with. Table 5 reveals the F-critical 2.92 exceeded the F-computed 1.8126 and this led to the rejection of the alternative hypothesis. This implied that there is no significant difference among the indicators of the skills in Phonemic and numeracy when they are categorized according to age. Notions about literacy have been shifting over the years; including beliefs that literacy is a singular skill set and that people are either literate or illiterate (Muth & Perry, 2010). Conceptualizing literacy as something one does, as opposed to a skill or ability one has, helped us understand the real-world ways in which real people actually engaged with real texts, which ultimately could help educators make formal literacy instruction more meaningful and relevant for learners.

Findings

Specifically, it sought to answer the following questions:

What is the profile of the respondents in terms of

Age

There were 30 kindergarten officially enrolled in Barangay Miatan, Katipunan, Zamboanga del Norte during school year 2014-2015. They were 3 to 6 years of age. There were 9 pupils who are 3 years of age, 9 pupils who are 4 years old and 5 pupils who are 5 years of age and 7 pupils who are 6 years old.

Gender; and

There were 4 male who are 3 years old, 5 male who are 4 years old, 3 male who are 5 and 3 male who are 6. There were 5 female who are 3 years old and 4 female who are 4, 2 female who are 5, and 4 female who are 6.\

Religion?

The 30 pupils are all Roman Catholic.

What is the level of Sibol learners in terms of the following Reading Readiness indicators as to:

- Phonemic Awareness Skills
- In terms of phonemic awareness skills, they obtained the weighted mean of 2.46 which is described as "Less Skillful/Developing".
- Skillful/Developing".

- Numeracy Skills. In terms of numeracy skills, they obtained the weighted mean of 2.40 which is described as "Less Skillful/Developing".
- Is there a significant difference between the male and female Sibol learners' oral reading skills?.

There is no significant difference between the male and female Sibol learners' oral reading skills with respect to different indicators.

Is there a significant difference among the skill in phonemic awareness and numeracy skills?

There is no significant difference among the skills in Phonemic Awareness and numeracy Skills of the Sibol learners.

What is the possible intervention measures which could be recommended based on the findings of this study?

The following are the sample interventions: mastering letter-sound correspondences, blending sounds to make words, repeated reading, text visualizations, assisted reading, paired reading, etc.

Conclusion

The following conclusions were drawn from the findings of the study

- The sibol learners of Barangay Miatan, Katipunan, Zamboanga del Norte need more improvement in terms of their Oral Reading Skills as to Phonemic Awareness and Numeracy Skills.
- Both male and female sibol learners in Barangay Miatan, Katipunan, Zamboanga del Norte were Less Skillful in Oral Reading Readiness especially in Phonemic Awareness Skills and Numeracy Skills.

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