ÉKWÉ INTERNATIONAL JOURNAL OF IGBO SCHOLARS FORUM FOR SOCIO-CULTURAL ADVANCEMENT (INC) Volume 19, No 4, OCTOBER, 2026 ISSN: 2476-8448

DEGREE OF LINGUISTIC COMPETENCE OF KINDERGARTEN TWO AND THREE PUPILS IN EARLY READING IN OWERRI NORTH L.G.A OF IMO STATE.

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Abstract

This study investigates degree of linguistic competence of kindergarten 2 and 3 pupils in early reading in Owerri North L.G.A. of Imo State. Its objective was to determine the influence of age, gender and location on each of the two classes in the following areas of early reading: phonemic awareness, word recognition, comprehension and fluency. This study adopts a quantitative research paradigm precisely, a descriptive survey. The population of the study comprised all the kindergarten2 and 3 pupils in both public and private schools in Owerri North L.G.A of Imo State. Through stratified random sampling, a total of 200 pupils were selected from both kindergarten 2 and 3 classes. The instrument used for data collection was a self-constructed test instrument titled Early Reading Linguistic Competence Test (ERLCT) which was validated by three experts from the departments of Measurement and Evaluation, Early Childhood Care and Education and Linguistics respectively. ERLCT was administered in two phases within an interval of two weeks at the beginning of a new academic session. Data were analysed using paired mean differences, standard

deviations and t-test. Results revealed that kindergarten 2 could not demonstrate adequate linguistic competence in the early reading components in the context of the independent variables age, gender and location. Kindergarten 3 on the other hand showed variations of adequate linguistic competence in some of the early reading components in the context of age and gender. It was therefore concluded among others that age and gender, influence the degree of linguistic competence of kindergarten pupils in early reading while location is considered to have no influence. Consequently, this study fills a knowledge gap in early reading in the context of Owerri North L.G.A of Imo State, Nigeria.

Introduction

The emergence of language in a child occurs at the early stage of a child's development and this sequence could be perceived as language development. In this light, Oluikpe and Oluikpe (2014) conceive language development as 'the process involved in acquiring and learning a language'. By implication, language development is a synthesis of two key concepts which are *acquisition* and *learning.* It can be described as a process that happens in a natural environment unconsciously and effortlessly and does not also require a teacher. Language learning on the other hand, takes place in a school setting. It is done with some level of consciousness and some efforts. Also, it requires a teacher. Summarily put, language development in children is the development of the linguistic structures: phonology, morphology, syntax and semantics of a language.

The development of language in children progresses from simple to complex. Hence, it undergoes a process. Youssra and Aya (2020) describes that language development in children takes place from birth to 6 years. To them, it occurs in stages and basically begins with the pre-linguistic stage from birth to 10 months. At the pre-linguistic stage, the child tries to convey messages as hunger, thirst and others at first through crying. This stage is followed by cooing. During this stage, the vocalization consists of short vowels like /u/ or a combination of a short vowel and a consonant sound to create gurgling sounds. Between ages 5 and 12 months is the blabbing stage. It involves a broader variety of vivid sounds. Between ages 12 months and 18 months is the holophrastic stage. At this stage of language development, the child uses a single word to express a sentence. This is followed by the two word sentence stage at 18 to 20 months. At ages 2 and 3 is the telegraphic stage. This is the stage a child can make three or four sentences to express himself. The above descriptions by Youssra and Aya for language development are the preconditions that that can enable reading in children. .

At school, the child's linguistic skill is further enhanced through the introduction of reading. This type of reading could be called early reading. Suggate (2013), sees early reading as "reading before children are readily able to learn to read or before the transition into middle childhood" (p.124). From Suggate's view about early reading, it can be deduced that early readers are children between the ages of three and seven. Considering the age

of the early readers, early reading follows a systematic process for effectiveness. Some prescriptions for developing early reading have been explored in the past. Some of such prescriptions include basal reading, phonics and whole language.

In the 1930s, basal reading was a popular method adopted to achieve early reading in America. According to Levine and Munsch (2011),it is non-phonic and it emphasizes sight reading. In a bid to describe its process, they explain that children are introduced to a limited set of words and a great deal of repetition employed to ensure rapid recognition of words once sighted, after which a new set of limited words are also introduced. This process continues in this order until effective reading is achieved.

A close look at the above process suggests that it is greatly influenced by the empiricists' perception about language development. The proponents of this view consider a child not to have any idea about reading hence he is inactive and depends only on what the teacher exposes him to through repetition, memorization and practice. Similarly, Bainbridge and Malicky (2000) add that basal reading focuses more on the literal meaning of the words over the other meanings they could have in different contexts.

Sequel to the above is the phonics prescription. According to Carbo (1996), as cited in Levine and Munsch (2011), the phonics prescription was subscribed to in the 1970s as it replaced the basal reading process of developing early reading. According to Texas Education

Agency (2004) as cited in Levine and Munsch (2011), "… the phonics method entails letter/sound correspondence, which are combined to form words" (p.134). It further exemplifies the sounds associated with the letters that make up a word as in *cat* which is phonemically represented as /kæt/. It could be construed that the phonics prescription recognizes letters as sounds which are combined to forms words, and words combined to form sentences.

The above prescription may be a new development when compared to basal reading. However, it is thought not to be superior to the former as it has its obvious flaws. Not every word could be pronounced using letter sound correspondence. Words like *you, key, ewe, the, said* and many other English words defy the provision of the phonics prescription. It also de-emphasizes contextual meaning which limits the vocabulary development of a child. However, the phonics method tends to reflect features of empiricists and rationalists views of child language development respectively. Helping a child to get acquainted with English phonemes through repetition and memorization of the letter sounds activates the mental language structure that is innate in the child. Consequently, this help given to the child, is inductive, an attribute of the empiricists, while giving the child practical tasks in reading that would require the application of his innate ability that have been activated, is deductive which is an attribute of the rationalists' perception.

Next is the whole language prescription which emerged and dominated the phonics prescription in the 1990s.

Armbruster et al (2001), as cited in Levine and Munsch (2011), explain that this method centres on the contextual meaning of words. In other words, it focuses on the comprehension of a passage which is dependent on the meaning of words as a result of the context where they occur. This prescription, however, may be considered to be a bit complex for beginners because a child ought to recognize and understand the meaning of words in isolation first before proceeding to do same in a context. However, this could be simplified to children through the use of pictures that reflect the content of a passage. This prescription is perceived to reflect the attributes of the constructivists' view on child language development, as the child is the focus and is actively involved in constructing meaning from a given passage.

Levine and Munsch (2011), report that, by the end of the 1990s, the effectiveness of the whole language prescription was questioned as this triggered off a quest for the best process to develop early reading. Similarly, Callender and Nahmad-Williams (2010), reveal that there was a debate between the adoption of the phonics and whole language prescriptions to early reading. Levine and Munsch (2011), point out that this debate is yet to be resolved.

The language experience process is another prescription that forms a child's prior knowledge in the schema. A child communicates his intentions through a language in which he/she has developed the speaking skill. Hence, when a child's language patterns and experience constitute the materials for reading in a language, reading becomes easier and there is a smooth transition

from listening and speaking to reading and writing. Keene (1985), elaborates that "language experience makes the reading process more natural for the beginner because the language patterns used in the materials are not artificial but match those of the reader" (p.6). Where a child's first language is different from his second language in which he is groomed to read, it is believed that there are patterns of the first language which would facilitate a successful reading in the second language and there are patterns as well which would likely create a difficulty. Consequently, the child's first language experience becomes his/her prior knowledge for speaking, reading and writing in the second language.

In Nigeria today, however, it has been observed that most children in the primary and secondary schools have a reading difficulty while some others find reading labourious. Hence, this affects their academic performance in almost all the subjects. Lawal (1995), endorses the above when he explains thus:

... if a learner possesses poor reading habits, he suffers serious handicaps not only in school but also later in the world of work. This is even truer when one considers the fact that education is now learner centred with the more effective techniques placing a far greater emphasis on the learner's ability to read (p.135).

In most kindergarten and primary schools, reading is done using sight reading while some others adopt both sight reading and phonics method (focusing only on the letter sounds) without much emphasis on meaning and vocabulary development. Consequently, early reading

skill is not effectively achieved as it reflects in children who read with difficulty in both primary and secondary schools. However, there could be situations where pedagogy would not pose a difficulty but other variables such as age, location of school, noise, socioeconomic factors and many others beyond the teacher's control create a variation in the pupils' performance in reading. Onoyase (2015), observes that "many variables may be held responsible for either good or poor performance of children in the school. For example, inheritance and the type of school environment have been held accountable" (p.1).Onoyase's opinion suggests that there are other variables that could affect the performance of children in reading. Oluikpe and Oluikpe (2014), categorize these variables into positive and negative. According to them, some of the variables can have a dual function of exhibiting both negative and positive influences while some others have stereotyped function of having either positive or negative influence on the reading performance of pupils. They consider motivation, intelligence, aptitude, self-esteem and risk-taking to have positive influence; inhibition is thought to have a negative influence, while attitude, anxiety, empathy, extroversion, age, and social distance could have either positive or negative influence on the performance of the learners. Summarily put, these variables could be within the learner or outside the learner. Consequently, to forestall the above reading challenges and difficulties among some primary and secondary school students, necessitates the pertinence to introduce early reading skills to kindergarten pupils at their foundational level as well asdetermine the level of skill and exposure given to

children at this stage that would enable effective reading in children.

Against the above background, there is the need to investigate the degree of linguistic competence of kindergarten two and three pupils in early reading in Owerri North L.G.A of Imo State in the context of such variables as*class/age*(Vlachos & Papadimitriou 2015; Moran. Senseny & Mitton 2016; Thoren, Heinig& Brunner 2016).*Gender* (Mohr & Price 2016;Hu, Yan, Wen & Wang 2021; Lepper & Rabrig 2021). *Location* (Essien 2017; Amadi, Nnaman & Ukoha 2018; Awopetu & Ossom 2018). These studies on the variables, class, gender and location above reveal that the aforementioned variables are researchable. Consequently, they qualify for use in this study.

Statement of the Problem

Reading difficulty among primary school children could be traced to language disorder, delays in language development and poor reading foundation. Lawal (2023) in study affirms that 'reading and numeracy serve as the foundation for acquiring formal knowledge in our educational system and have encountered difficulties in recent years'. He further reveals that 'there was a decline in pupils' academic performance in literacy and numeracy. For 2019,2020 and 2021 were 52%, 54% and 60% respectively'(pg4).Concurring with the above discovery, Bilyaminu (2021) expressed that the issue of reading has been perceived by different authorities in the educational sector as an area of concern (pg.19).The above exposition on the growing concern of poor

performance in reading motivated this study. This poor performance in reading could be influenced by such variables as class, gender, location as classroom observation appear to indicate.

Hypothesis

The following hypotheses were constructed to guide the study:

1. There is no significant difference in the mean achievement scores of kindergarten 2 pupils showing adequate linguistic competence in the following components of early reading:
    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency
2. There is no significant difference in the mean achievement scores of kindergarten 3 pupils showing adequate linguistic competence in the following components of early reading:
    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency

3. There is no significant difference in the mean achievement scores of male kindergarten 2 showing adequate linguistic competence in the following components of early reading:

    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency

4. There is no significant difference in the mean achievement scores of female kindergarten 2 showing adequate linguistic competence in the following components of early reading:

    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency

5. There is no significant difference in the mean achievement scores of malekindergarten 3 showing adequate linguistic competence in the following components of early reading:

    - Phonemic awareness
    - Word recognition

- Comprehension
- Fluency

6. There is no significant difference in the mean achievement scores of femalekindergarten 3 showing adequate linguistic competence in the following components of early reading:
    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency
7. There is no significant difference in the mean achievement scores of kindergarten 2 in the urban area showing adequate linguistic competence in the following components of early reading:
    - Phonemic awareness
    - Word recognition
    - Comprehension
    - Fluency
8. There is no significant difference in the mean achievement scores of kindergarten 2 in the rural area showing adequate linguistic competence in the following components of early reading:

- Phonemic awareness
- Word recognition
- Comprehension
- Fluency?

Purpose of Study

The purpose of the study in broad terms is to determine the degree of linguistic competence of kindergarten 2 and 3 pupils in early reading. Specifically, the objective of the study is to determine the linguistic competence of each of the two classes in early reading and the influence of the variables; age, gender and location on the linguistic competence in the following areas of early reading:

- Phonemic awareness
- Word recognition
- Comprehension
- Fluency

Methodology

This study employs a quantitative research paradigm, precisely a descriptive survey. The design entails the collection and use of data systematically from a given sample to describe certain characteristic features of the population. Specifically, it describes the findings on the degree of linguistic competence of kindergarten two and

three pupils in early reading in the context of the variables class, gender and location.

The area of the study is Owerri North L.G.A. of Imo State. Owerri North L.G.A. is one of the 27 L.G.As in Imo State, Nigeria. There are 245 nursery and primary schools in Owerri North LGA. 47 are public schools while 198 are registered private schools according to the Imo State Universal Basic Education Board (SUBEB).

The population of the study indicates the total number of kindergarten 2 and 3 pupils in Owerri North L.G.A. of Imo State as follows:

Table 1: Distribution of Kindergarten Schools in Owerri North LGA

Locality	**No of Schools**	**K2**	**K3**	**Total**
		Male Female	**Male Female**	
Urban	80	1,823 1,773	1,731 1,821	7,148
Rural	165	2,791 2,592	3,044 2,811	11,238

Table 1 shows the number of nursery schools in Owerri North L.G.A. Out of two hundred and forty-five schools in the area, one hundred and sixty-five are in the rural area while eighty schools are in the urban area. In the same vein, K2 and K3 classes in the urban area have a total number of 7,148 pupils while their counterparts in the rural area have a total number of 11,238 pupils in K2

and K3 classes as revealed by the Education Management and Information System (EMIS), Department of Planning Research and Statistics SUBEB, Imo State.

The sampling technique employed to ensure that all the relevant features of the study population were adequately represented in the study was stratified random sampling technique. The stratification was along location of schools, gender and class of the sampled population as the following tables reveal:

Table 2: Sample Distribution of Schools

Locality	**Name of School**	**Population of Schools**
Urban	1.Calvary Int'l School Orji	74
	2. Greenland Int'l School Orji	82
	3. Akwakuma Primary School Akwakuma	112
	4.Owaelu Primary School Uratta	82
	5. Community School Alum Orii/Uratta	43
Rural	1. Aunty Bertha's Educational Centre	66
	2.Holy Family Nursery & Primary School Uratta	
	3. Community Central School Emekuku	42
	4. Community School Owalla Uratta	187
	5. Alpha Groups Academy Orji	42
		38

	Total	**768**

Table 2 represents the sample distribution of schools in Owerri North L.G.A of Imo State. It shows that out of the 245 nursery schools in the local government area, approximately 5% of the total number was selected. Hence, a total number of 10 schools were selected for the study. 5 schools is located in the urban area while the other 5 schools is located in the rural area. The total population of K2 and K3 pupils in the ten schools is 768.

From these ten schools, the target population was selected through stratified random sampling as shown below:

Table 3: Sample Distribution by Class

Locality/ School	**No of Pupils Per Class**		**Total**
	K2	K3	
Urban			
1.Calvary Int'l School Orji	15	15	30
2. Greenland Int'l School Orji	09	08	17
3. Akwakuma Primary School Akwakuma	14	13	27
4.Owaelu Primary School Uratta	05	05	10
5. Community School Alum Orii/Uratta	06	10	16
Rural			

1. Aunty Bertha's Educational Centre	05	09	14
2. Holy Family Nursery & Primary School Uratta	10	09	19
3. Community Central School Emekuku	13	16	29
4. Community School OwallaUratta	10	08	18
5. Alpha Groups Academy Orji	10	10	20
Total	97	103	200

Table 3 indicates that out of 768 selected sample population, 97 were drawn for K2 while 103 for K3 classes. Below is a table on gender which is a variable in the study.

Table 4: Sample Distribution by Gender

Locality/School	**Gender of Pupils**				**Total**
	K2		**K3**		
	m	f	m	f	
Urban					
1.Calvary Int'l School Orji	09	06	07	08	30
2. Greenland Int'l School Orji	04	05	04	04	17
3. Akwakuma Primary School Akwakuma	07	07	07	06	27
4.Owaelu Primary School Uratta	01	04	04	01	10
5. Community School Alum	03	03	05	05	16

Orii/Uratta					
Rural 1. Aunty Bertha's Educational Centre 2. Holy Family Nursery & Primary School Uratta 3. Community Central School Emekuku 4. Community School OwallaUratta 5. Alpha Groups Academy Orji	04 05 07 05 05	01 05 06 05 05	05 05 07 04 06	04 05 09 04 03	14 20 29 18 19
Total	50	47	54	49	
Grand Total	Male -97		Female103		**200**

Table 4 above indicates the sample distribution of pupils according to gender. Out of the 200 pupils selected as the representative sample, 97 are males while 103 are females.

Table 5: Sample Distribution by Location

Locality	**Name of School**	**No of Pupils**
Urban	1.Calvary Int'l School Orji	30
	2. Greenland Int'l School Orji	17
	3. Akwakuma Primary School Akwakuma	27

	4.Owaelu Primary School Uratta 5. Community School Alum Orii/Uratta	10 16
	Total	100
Rural	1. Aunty Bertha's Educational Centre 2.Holy Family Nursery & Primary School Uratta 3. Community Central School Emekuku 4. Community School Owalla Uratta 5. Alpha Groups Academy Orji	14 20 29 18 19
	Total	100
	Grand Total	**200**

Table 5 sample distribution shows the sample distribution of schools according to location. Out of the 200 pupils randomly selected for the study, 100 pupils are from five schools in the urban area while 100 pupils are from five schools in the rural location of Owerri North L.G.A respectively.

The instrument used for data collection in the study is a self-constructed test called Early Reading Linguistic Competence Test (ERLCT). ERLCT was designed to determine the degree of linguistic competence of kindergarten 2 and 3 in early reading at the beginning of a school year before the commencement of instruction in the following components of early reading:

- Phonemic awareness

- Word recognition
- Comprehension
- Fluency

The instrument has two parts: section 1 and section 2. Section 1 elicits information on the respondents' bio-data with regard to name of school, location of school, class, gender and age. Section 2 on the other hand, is the main test. The test contains 21 items which are divided into five clusters. Each cluster has five questions except for cluster A which has one item. However Cluster A and B were combined together, given that they assess similar early reading component. Consequently, clusters A and B seek information on letter naming and phonemic awareness respectively. Cluster c on word recognition, cluster D on comprehension and cluster E on fluent reading.

The administration and collection of data were done by the researcher, four research assistants in addition to the kindergarten minders in the various schools for the study. They were trained and guided by the researcher on how to administer the instrument. 200 copies of the test instrument were administered and retrieved the same day both in the first and second administration. The marking of the test instruments administered was solely done by the researcher. The test was marked out of 100 as each of the five clusters of question item carries 20 marks. Considering the age of the population, the ethical observance for this group of children was strictly followed. In this regard, the consent of the school,

parents and the respondents were sought. The respondents were not coaxed into participating in the test. It was out of their own volition that they participated. The names of each of the respondents were not included in the bio-data section of the test instrument though age and gender were elicited. To protect these few information about the respondents, the marking of the test instrument and compilation of the scores were solely carried out the researcher.

Data were analysed based on the research questions and hypothesis. The research questions were answered using paired mean differences and standard deviations while the hypothesis was tested using t- test of significant difference between the means. All analyses were performed using SPSS version 25, with significance level set at 0.05. Letter naming and phonemic awareness were combined together in the data analysis because their connection cannot be separated. However, the other areas of early reading were analysed separately.

Results / Findings

Research Question 1

To what degree do the mean achievement scores of pupils in kindergarten 2 indicate adequate linguistic competence in early reading in phonemic awareness, word recognition, comprehension and fluency?

Table 1: Paired sample means and standard deviation of KG 2 for 1st and 2nd test.

Components of Early Reading	1st test			2nd test		
	Mean	N	SD	Mean	SD	Mean Df.
PA	27.6	94	12.55	26.0	14.17	1.6
WR	13.4	94	6.54	12.8	7.09	0.6
Comprehension	13.4	94	6.42	12.3	7.85	1.1
Fluency	12.9	94	7.04	12	8.22	0.9

The above table shows the mean responses, standard deviations and mean difference scores of KG2 pupils in four areas of early reading. The result shows that the mean responses of the pupils in 1st tests for the 4 areas of early reading are greater than that of their 2nd tests with mean differences of 1.6, 0.6, 1.1 and 0.9 for PA, WR, Comp. and Fluency respectively.

The standard deviations for the 4 areas are relatively highly showing that the pupils' responses are not so much clustered to the means.

Hypothesis 1: There is no significant difference in the mean achievement scores of kindergarten 2 pupils showing adequate linguistic competence in phonemic awareness, word recognition, comprehensive and fluency.

Table 2:

t-calculated values of differences in the means

Components of Early Reading	MeanDf.	SD	t-test	Df.	Sig.	Decision
PA	1.57	9.32	1.17	92	0.248	Not sig.
WR	0.55	6.084	0.628	92	0.533	Not sig.
Comprehension	1.13	5.27	0.497	92	0.149	Not sig.
Fluency	0.98	6.15	1.091	92	0.281	Not sig.

A comparison of the t-calculated values of the differences in the mean responses of the pupils in their1st (degree of linguistic competence) and 2nd tests indicated the values of 1.17, 0.628, 0.497 and 1.091 for the 4 areas of early reading of phonemic awareness, word recognition, comprehension and fluency respectively. Given that all these t-test values resulted to respective level of significance of 0.248, 0.533, 0.149 and 0.281 which are greater than the chosen level of 0.05, the difference can be said to be not significant. The null hypothesis of no significant difference in the mean scores of the pupils is therefore accepted.

Research Question 2

To what degree do the mean achievement scores of pupils in kindergarten 3 indicate adequate linguistic competence in early reading in phonemic awareness, word recognition, comprehension, and fluency?

Table 3: Paired sample means and standard deviation of KG 3

	1st test			2nd test		
Components of Early Reading	**Mean**	**N**	**SD**	**Mean**	**SD**	**Mean Df.**
PA	33.5	106	10.07	29.9	9.02	3.56
WR	13.9	106	6.78	15.4	5.17	1.46
Comprehension	13.7	106	6.95	15.9	5.95	2.19
Fluency	15.0	106	7.10	12.9	8.34	2.03

Table 3 above shows the mean responses achievement scores of KG3 pupils in the degree of linguistic competence (1st test) and 2nd test in the areas of phonemic awareness, word recognition, comprehension, and fluency.

The results indicate that whereas their scores in phonemic awareness and fluency show a reduction in the degree of linguistic competence, which of the 2nd test shows an increase in the areas of word recognition and comprehension with increase in scores of 1.46 and 2.19. This shows adequate linguistic competence. Their respective standard deviations are relatively high showing that the mean responses of the pupils in all the areas in the two tests are not clustered to the mean.

Hypothesis 2: There is no significant difference in the mean achievement scores of KG 3 pupils showing

adequate linguistic competence in phonemic awareness, word recognition, comprehension, and fluency.

Table 4: t-calculated values of differences in the means PA, WR, comprehension, and fluency

Components of Early Reading	Mean Df.	SD	t-test	Df.	Sig.	Decision
PA	3.56	11.35	2.26	104	0.028	Sig.
WR	1.47	7.09	1.51	104	0.137	Not sig.
Comprehension	2.19	6.91	2.31	104	0.025	Sig.
Fluency	2.04	7.31	2.03	104	0.048	Sig.

The results as indicated in the above table shows that the t-test value of the differences in the means for phonemic awareness, word recognition, comprehension, and fluency are respectively 2.26, 1.51, 2.13 and 2.03 with respective levels of significances of 0.028, 0.137, 0.025 and 0.048. This shows that the difference in the mean of phonemic awareness, comprehension, and fluency between the degree of linguistic competence and the pupils 2nd test are significant while that of word recognition is not significant, whereas the significant mean differences between degree of linguistic competence (1st test) and 2nd test in areas of comprehension and fluency are in favour of 2nd test; that of word recognition is in favour of the 1st test. The null hypothesis is accepted for word recognition but rejected for phonemic awareness, comprehension and fluency. The conclusion is that linguistic competence has

adequate and significant impact in the areas of comprehension and fluency.

Research Question 3

To what degree do the mean achievement scores of male pupils in kindergarten 2 indicate adequate linguistic competence in early reading in phonemic awareness, word recognition, comprehension, and fluency?

Table 5: Paired sample means, standard deviation and mean differences of male KG 2 pupils

	1st test			2nd test		
Components of Early Reading	**Mean**	**N**	**SD**	**Mean**	**SD**	**Mean Df.**
PA	26.2	50	12.29	26.8	13.32	0.56^{+}
WR	12.4	50	6.38	12.4	6.98	00
Comprehension	12.4	50	6.38	12.3	7.37	0.12^{-}
Fluency	12.0	50	6.76	12.1	8.07	0.88^{-}

The results from the table above indicate the mean achievement scores, standard deviations and mean differences of the pupils in the 4 areas of early reading. It shows that the pupils' scores in early reading in PA shows adequate linguistic competence given that their scores in the 2nd test is greater than that of 1st test (degree of linguistic competence). That of WR, however, shows no difference while their scores in comprehension and fluency were bigger at the 1st administration than the 2nd test.

Their standard deviations in the 4 areas of early reading are relatively higher showing that the respective scores of the pupils in PA, WR, comprehension, and fluency do not cluster around the mean.

Hypothesis 3: There is no significant difference in the mean achievement scores of male KG 2 pupils showing adequate linguistic competence in phonemic awareness, word recognition, comprehension and fluency.

Table 6:

T-calculated values of differences in the means PA, WR, comprehension, and fluency

Components of Early Reading	Mean Df	SD	t-test	Df.	Sig.	Decision
PA	.56	8.921	0.314	48	.756	Not sig.
WR	.000	5.196	000	48	1.00	Not sig.
Comprehension	.12	4.494	.134	48	.895	Not sig.
Fluency	.88	5.191	.848	48	.405	Not sig.

The results shown in table 6 indicate that the t-test value of differences in the mean achievement scores of the pupils in PA, WR, comprehension, and fluency are respectively .314, 000, .848 and .405. Given that all these levels of significance are greater than the chosen alpha level of 0.05, the null hypotheses as it relates all the areas of early reading are accepted. The decision therefore is to accept the null hypothesis and state that

there is no significant difference in the mean achievement scores of the male KG 2 pupils in the degree of linguistic competence (1st test) and 2ndtest.This means that the mean scores of the male pupils in KG 2 do not show adequate difference between degree of linguistic competence and 2nd tests in early reading.

Research Question 4

To what degree do the mean achievement scores of female pupils in kindergarten 2 indicate adequate linguistic competence in early reading in phonemic awareness, word recognition, comprehension, and fluency?

Table 7: Paired sample means, standard deviation and mean differences of female KG 2 pupils

Componentsof Early Reading	1st test			2nd test		
	Mean	N	SD	Mean	SD	Mean Df.
PA	29.1	44	12.939	25.1	15.34	4
WR	14.5	44	6.703	13.3	7.43	1.18
Comprehension	14.6	44	6.396	12.4	8.54	2.73
Fluency	12.9	44	7.502	11.8	8.60	1.09

Table 7 above shows the mean achievement scores of female KG 2 pupils and the difference between these scores in 1st test (degree of linguistic competence) and 2nd test in the 4 areas of early reading. It is also revealed that their mean achievement scores in the degree of linguistic competence (1st test) and 2nd test differ with

mean differences of 4, 1.18, 2.73 and 1.09 respectively in areas of PA, WR, comprehension, and fluency. All these differences are in favour of the 1st test (degree of linguistic competence).That is, the 1st test scores in the 4 areas of early reading are greater than their 2nd test mean achievement scores. The conclusion is that the mean achievement scores of the female KG 2 pupils do not indicate adequate linguistic competence.

Hypothesis 4: There is no significant difference in the mean achievement scores of female KG 2 pupils showing adequate linguistic competence in PA, WR, comprehension, and fluency.

Table 8:

t-calculated values of differences in the means of PA, WR, Comprehension, and fluency

Components of Early Reading	Meandf.	SD	t-test	Df.	Sig.	Decision
PA	4.0	9.155	2.048	42	.053	Not sig.
WR	1.18	6.946	0.798	42	.434	Not sig.
Comprehension	2.73	5.93	1.798	42	.087	Not sig.
Fluency	1.09	7.217	0.709	42	.486	Not sig.

Table 8 above shows the t-test scores of the differences in the mean achievement scores of KG 2 pupils and their degree of linguistic competence. Although the

differences in the mean achievement scores between the 1st test (degree of linguistic competence) and the 2nd test are in favour of the degree of linguistic competence, the differences resulted to t-scores of 2.049, 0.798, 1.798 and 0.486 respectively for PA, WR, comprehension, and fluency. These t-scores respectively gave rise to the level of significance of 0.053, 0.434, 0.087 and 0.486 which are greater than the chosen alpha level of 0.05 indicating that these differences are not significant. The conclusion is that the differences in mean achievement scores of KG 2 female pupils in PA, WR, comprehension, and fluency do not significantly show adequate linguistic competence.

Research Question 5

To what degree do the mean achievement scores of male pupils in kindergarten 3 indicate adequate linguistic competence in phonemic awareness, word recognition, comprehension, and fluency.

Table 9: Paired sample means, standard deviations and mean differences of male KG 3 pupils

Components of Early Reading	1st test			2nd test		
	Mean	N	SD	Mean	SD	Mean Df.
PA	33.5	104	10.065	29.9	9.015	3.56
WR	13.9	104	6.776	15.4	5.174	1.471
Comprehension	13.7	104	6.951	15.9	5.951	2.189

Fluency	15	104	7.099	12.9	8.338	2.038

Result as indicated in the table above shows that the mean early reading achievement of male pupils in KG 3 in the areas of PA, WR, comprehension, and fluency are respectively 33.5, 13.9, 13.7 and 15 with respective mean differences of 3.56, 1.471, 2.189 and 2.038.

The mean differences of 3.56 and 2.038 are in favour of 1st test (degree of linguistic competence) for PA and fluency while that of 1.471 and 2.089 are in favour of 2nd test for WR and Comprehension indicating adequate degree of linguistic competence. The standard deviations for all the entries are relatively high showing that the individual mean scores of the male KG 3 pupils are not clustered towards the mean scores.

Hypothesis 5

There is no significant difference in the mean achievement scores of male KG 3 pupils showing adequate linguistic competence in the components of early reading; phonemic awareness, word recognition, comprehension, and fluency.

Table 10: t-calculated values of differences in the means PA, WR, Comprehension, and fluency

Components of Early Reading	Mean df.	SD	t-test	Df.	Sig.	Decision
PA	3.56	10.356	2.260	50	.028	Sig.
WR	1.471	7.315	1.512	50	.137	Not sig.

Comprehension	2.189	5.974	2.305	50	.025	Sig.
Fluency	2.038	5.665	2.078	50	.048	Sig.

Table 10 above shows that t-test scores for the differences in the mean achievement scores of 1st test (degree of linguistic competence) and 2nd test are 2.260, 1.512, 2.305 and 2.028 for PA, WR, comprehension, and fluency respectively. These t-test scores resulted to levels of significance of 0.028, .137, .025 and .048. This implies that the differences in mean scores of PA, comprehension and fluency are significant as their obtained levels of significance is less than the chosen level of 0.05 while that of WR early reading component is not significant. The null hypothesis as it relates PA, comprehension and fluency is rejected, while it is accepted for WR. In conclusion, there is a significant difference in the male KG 3 pupils achievement scores showing adequate linguistic competence in comprehension while that of those showing adequate linguistic competence in area of WR do not differ significantly.

Research Question 6

To what degree do the mean achievement scores of female KG 3 indicate adequate linguistic competence in phonemic awareness, word recognition, comprehension, and fluency?

Table 11: Paired sample means, standard deviation and mean differences of female KG 3 pupils

Components of Early	**1st test**	**2nd test**

Reading

	Mean	N	SD	Mean	SD	Mean Df.
PA	13.3	52	11.29	25.9	8.88	5.4NA
WR	13.5	52	7.59	16.4	5.0	2.9 A
Comprehension	13.5	52	7.84	15.2	6.6	1.7 A
Fluency	16.4	52	7.02	13.7	8.77	2.7 NA

The above table shows the mean differences between the achievement scores of female KG 3 pupils, between the degree of linguistic competence scores (1st test) and 2nd test. It shows that their scores in 1st test is greater than that of 2nd test in the components of PA and fluency with mean differences of 5.4 and 2.7 while their scores in 2nd test is greater than that of 1st test indicating adequate linguistic competence with mean differences of 2.9 and 1.7 in WR and comprehension. Their respective standard deviations are relatively highly indicating that the scores are not clustered above the mean they are therefore spread wide apart.

Hypothesis 6

There is no significant difference in the mean achievement scores of female KG 3 pupils showing adequate linguistic competence in phonemic awareness, word recognition, comprehension, and fluency.

Table 12: t-calculated values of differences in the means PA, WR, comprehension, and fluency

Components of Early reading	Mean Df.	SD	t-test	Df.	Sig.	Decision
PA	5.36	12.297	2.179	50	0.039	Sig.
WR	2.85	6.703	2.165	50	0.040	Sig.
Comprehension	1.69	7.858	1.098	50	0.283	Not sig.
Fluency	2.73	8.771	1.588	50	0.125	Not sig.

The above table shows the t-test scores of differences in the means of 1st and 2nd tests in the areas of PA, WR, comprehension, and fluency. The t-test scores are respectively 2.179, 2.165, 1.098 and 1.588. The levels of significance of these t-tests are 0.039, 0.040, 0.283 and 0.125. This indicates that the differences of the mean scores between the 1st test (degree of linguistic competence) and 2nd tests in the components of PA and WR are significant while that of comprehension and fluency are not significant. The null hypothesis is therefore not accepted for PA and WR but is accepted for comprehension and fluency.

Note however, that the female pupils' scores in the degree of linguistic competence adequately reflect in WR and comprehension but that of comprehension is not significant whereas that of WR is significant.

Research Question 7

To what degree do the mean achievement scores of KG 2 pupils in the urban area indicate adequate linguistic competence in early reading in phonemic awareness, word recognition, comprehension, and fluency?

Table 13: Paired sample means, standard deviation and mean differences of urban KG 2 pupils

	1st test			2nd test			
Component of Early Reading	**Mean**	**N**	**SD**	**Mean**	**SD**	**Mean Df.**	**Decision**
PA	34.1	60	7.50	33.7	7.81	0.4	NA
WR	16.3	60	5.03	16.7	4.21	0.4	A
Comprehension	16.3	60	4.33	16.5	5.11	0.2	A
Fluency	15.3	60	7.13	16.2	5.76	0.9	A

Results as indicated on table 13 shows the means and mean differences between the 1st test (degree of linguistic competence) and the 2nd test where the mean of 1st test in the area of PA is greater than that of the 2nd test, the means of urban KG 2 pupils in the 2nd test is greater in the components of WR, comprehension and fluency. The conclusion is that the scores of KG 2 pupils in urban area in the components of WR, comprehension and fluency indicate adequate linguistic competence while that of PA does not indicate adequate linguistic competence. Their respective standard deviation for the 4 components in 1st and 2nd test is relatively small, showing that their scores cluster around the mean.

Hypothesis 7

There is no significant difference in the mean achievement scores of KG 2 pupils in the urban area showing adequate linguistic competence in phonemic, word recognition, comprehension, and fluency.

Table 14: t-calculated values of differences in the means of PA, WR, comprehension, and fluency

Components of Early Reading	MeanDf.	SD	t-test	Df.	Sig.	Decision
PA	0.4	7.275	0.301	58	.765	Not Sig.
WR	0.4	4.62	0.474	58	.639	Not Sig.
Comprehension	.133	3.319	0.220	58	.827	Not Sig.
Fluency	.90	5.294	0.931	58	.359	Not Sig.

Table 14 presents the t-test scores of the differences in the scores of the urban pupils (KG 2) in the 4 components of early reading. Their t-test scores in PA, WR, comprehension, and fluency are respectively 0.301, 0.474, 0.220 and 0.931.

The t-test scores results in respective level of significance of 0.765, 0.639, 0.827 and 0.359 which are greater than the chosen alpha level of 0.05.

The implication therefore is that null hypothesis is accepted for the 4 components of early reading. The conclusion is that there is no significant difference in the mean scores of the KG 2 urban pupils indicating adequate linguistic competence in early reading. Their scores in the two tests (degree of linguistic competence and 2nd test) do not differ significantly.

Research Question 8

To what degree do the mean achievement scores of KG 2 pupils in the rural area indicate adequate linguistic

competence in early reading in phonemic awareness, word recognition, comprehension, and fluency?

Table 15: Paired sample means, standard deviation and mean differences ofKG 2 pupils in rural area in PA, WR, comprehension and fluency

	1st test			2nd test			
Component of Early Reading	**Mean**	**N**	**SD**	**Mean**	**SD**	**Mean Df.**	**Decision**
PA	16.1	34	11.426	12.4	12.649	3.65	NA
WR	8.2	34	5.783	6.0	5.916	2.23	NA
Comprehension	8.4	34	6.412	5.0	6.384	3.52	NA
Fluency	8.7	34	4.524	4.4	6.295	4.29	NA

Results as indicated in the above table shows the mean achievement scores of KG 2 pupils in the rural areas and their mean differences for the 4 components of early reading in the degree of linguistic competence test 1 and test 2.

The differences between the mean achievement scores of these pupils in the components of PA, WR, comprehension, and fluency for the 1st and 2nd test are 3.65, 2.23, 3.52 and 4.29 respectively. Given that these KG 2 rural pupils' scores for the 1st test is greater than that 2nd test in the 4 areas of early reading, the researcher therefore concludes that the achievement of KG 2 pupils in rural area in the 4 components does not indicate adequate linguistic competence.

The standard deviations in all the cases are relatively high, showing respectively that the scores have a higher spread hence they do not cluster around the mean.

Hypothesis 8

There is no significant difference in the mean achievement scores of KG 2 pupils in the rural area showing adequate linguistic competence in PA, WR, comprehension, and fluency.

Table 16: t-calculated values of differences in the means of PA, WR, Comprehension, and fluency

Components of Early Reading	Mean diff.	SD	t-test	Df.	Sig.	Decision
PA	3.65	11.895	1.264	32	0.224	Not sig.
WR	2.23	7.838	1.176	32	0.257	Not sig.
Comprehension	3.52	7.184	1.924	32	0.072	Not sig.
Fluency	4.29	6.302	2.809	32	0.013	Sig.

The table above shows that the t-test scores of the differences in the means of 1st and 2nd tests by KG 2 pupils in the areas of PA, WR, comprehension, and fluency are respectively 1.264, 1.176, 1.924 and 2.809 resulting to levels of significance of 0.224, 0.257, 0.072 and 0.013. Given that the levels of significance in the areas of PA, WR, and comprehension are smaller than the chosen alpha level of 0.05, the differences are not significant but significant in fluency where the level of significance is 0.013 which is smaller than 0.05.

The null hypothesis is therefore accepted in the area of PA, WR, and comprehension but rejected in fluency. The conclusion is that there is no significant difference in the rural KG 2 pupils scores showing adequate linguistic competence in PA, WR, and comprehension whereas a significant difference exists in the area of fluency. Worthy of note however, is that the KG 2 rural pupils' achievement scores in the 4 areas do not indicate adequate linguistic competence.

Discussion of the Findings

Class/ age is one of the major variables investigated in this study. The classes investigated were kindergarten 2 and 3 who invariably are perceived to be within the age range of 4-5 and 5-6 years respectively. Results from the analysis indicated that K2 pupils did not demonstrate adequate linguistic competence in any of the four components of early reading. However, K3 pupils showed adequate linguistic competence in comprehension and fluency components of early reading. Despite that this study is not a comparative study, one would not overlook the obvious that the disparity in the performances of the two classes is as a result of age difference. K3 pupils are more mature and have been exposed to more learning contents in early reading than K2 pupils. Consequently, this study upholds the view that age influences the performances of K2 and K3 pupils in early reading. In this light, Vlachos and Papadimitriou (2015) affirm this position as they acknowledge significant effect of age in reading performance with the older children having better scores than younger ones for reading fluency, reading

comprehension and the total reading performance. Also, the result of the study by Moran, Senseny and Mitton (2016) support the above stand as it recognizes a child's developmental age to be the strongest predictor of early literacy learning. In the same vein, the study by Liu, Zhang, Yu, Liu et al (2021) corroborates with the above position.

Following the above discussion, the researcher deduces that the two classes did not receive enormous exposure to learning contents in early reading that comprehensively cover phonemic awareness, word recognition, comprehension and fluency as it reflects in their performances. K2 pupils could not demonstrate adequate linguistic competence in any of the four areas of early reading even when it is presumed they have learnt some of them in their previous class. This suggests that other variables other than age influence the performance of K2 and K3 pupils in early reading.

Gender is another important variable examined in the study. Results from the analysis show that both the male and female K2 pupils did not demonstrate adequate linguistic competence in any of the four components of early reading. On the other hand, the K3 male pupils demonstrated adequate linguistic competence in comprehension while their female counterpart demonstrated adequate linguistic competence in phonemic awareness and word recognition components of early reading. The above result indicates gender differences in performance in the four components of early reading. This outcome could be perceived as products of interacting biological, socio-cultural and

instructional factors (such as differential teacher expectations, home literacy practices, gendered activity pattern). However, this is not the focus of this study even though the above result supports this position. Lepper and Rabrig (2021) holds a similar view as the above and assert that boys' interest was higher in texts with male-attributed topics, male protagonists, and in more difficult texts, conversely, girls' interest was only affected by text difficulty. Consequently, text-based interest and reading comprehension were significantly related, albeit stronger for boys than for girls.

In addition, the studies by Mohr and Price (2016) and Ngongare, Samalo and Rettob (2021) agree with the above stand. Mohr and Price (2016) acknowledge that boys learn to read more easily using the natural-style language of 'real' books including vocabulary which goes beyond their assumed decoding ability. In consonance with the above, Ngongare, Samalo and Rettob (2021) affirm that female students outperformed their male counterparts in reading comprehension. In this regard it can be stated that gender differences affect reading comprehension.

Location is also another variable that was examined in the course of this study. The class assessed in this regard was K2 pupils in the urban and rural areas of Owerri North LGA. Both urban and rural K2 pupils demonstrated inadequate reading competence, suggesting the deficit is systematic rather than confined to one setting. Essien (2017) in a study confirms this view and affirms that a school's location has no significant influence on students' academic achievement.

Conclusion

Based on the discussion above, the following conclusions are drawn:

- Adequate linguistic competence in early reading develops in phased progression. It covers the following areas – phonemic awareness, word recognition, comprehension and fluency. Age is a major variable in such development. Gender differences influence the performance of kindergarten pupils in early reading while location has no significant influence.

- In this phased progression, Kindergarten 2 pupils are yet to attain adequate linguistic competence inphonemic awareness, word recognition, comprehension and fluency.

- Kindergarten 3 pupils to some extent demonstrated adequate linguistic competence in some of the components of early reading.

- Other variables apart from age and gender influence the competence of kindergarten 2 and 3 in early reading.

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