Comparative Analysis of Readability Level of Basic Six Pupils in Private and Public Schools in Ibadan Land

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Abstract

The study was carried out to determine the readability level of pupils in private and public primary schools in Ibadan land. The study used simple random sampling with a sample size of 109 participants from both private and public basic six pupils from three selected local government areas in Ibadan land. Sixty-four pupils were taken from public schools while 45 pupils were selected from private schools. Modular English Course for Primary Schools Book Six was used to assess the readability level of the pupils. SMOG index and Close test procedure were used to measure the readability levels of the pupils. The data collected were analysed using the simple percentages to classify the participants into different readability levels and t-test statistics was used for comparison between readability levels of the pupils. The results indicated that the pupils from private primary school had readability levels of 78% independent, 22 % instructional, and 0% at frustration level, while the pupils from public schools had 31% at independent level, 36% at instructional level and 33% at frustration level respectively. The Smog index test is 5.82. There is significant difference in readability level of the basic six pupils in private and public schools (t = 6.294, df = 307 and p<0.05). Suggestions were made concerning low performance of public primary school pupils compared to their counterparts from private schools. This study recommends another or closer look at the English textbooks in use in schools in Ibadan land. Also, it is recommended that Government should employ experts in English language to handle the teaching-learning of English language right from the primary school level in enhancing the reading culture of the in-coming generation.

Key words: Comparative, Readability, Basic six, Private school and Public school

Introduction

Globally, language plays a significant role in human communication. Ezeokoli (2005) describes language as the cornerstone of academic success, a critical resource in all human endeavours, especially in the educative process. This probably informs the belief that language is the light of the mind, which is a means to the enlightenment and development of an individual. In Nigeria, formal education is delivered through the use of the English language.

The English language though foreign to Nigerians, has over the years played and has continues to play an enormous role in the Nigerian school system and the society at large. English language as stated in the National Policy on Education (2004) is the medium of instruction, examination and certification. Books on all subjects are written in English language except ones on local languages. Hence knowledge conceptualization in other content subject areas is made possible through the medium of the English language.

The central and strategic roles English language plays in the school system account for why it is one of the core subjects (NPE, 2004). At the certificate examination level, a credit pass or failure in it determines to a great extent, the educational advancement of senior secondary school students. Consequently, students are expected to acquire a thorough grounding in the spoken, written and reading aspects of the English language. Okonkwo and Okpara (1991) observe that English language is the gate-way to educational advancement and job opportunities. Institutions of higher learning make English language a prerequisite for admission. Most jobs are secured only when one has a good command of English language. As an official language in Nigeria, English is used for all government transactions both oral and written.

Over the years, the quest for proficiency in English language has motivated language experts and sociolinguists to derive and search for ways and methods of acquiring it, and yet there still remains a lot to be done. Hence, Ubahakwe (1991) emphasizes that teachers of English must adopt the appropriate approaches, methods and techniques. It is believed that on the one hand, poor teaching methods have contributed immensely to the appalling performance of students in English language and on the other hand the students themselves have been lazy and non-challant. There is evidence that the use of text materials can aid children to learn in schools but little information is available on the ease or difficulty of these text materials in Nigerian Primary Schools. Evidence related to readability has also shown that science texts are often too difficult for children (Yoloye, 1975; Okpala, 1985; and Ayodele, 2011), particularly in developing countries where pupils are learning through English as the medium of instruction (Peacock, 1995). The use of English for second Language (ESL) learners encounter numerous problems because learning science through English is complicated by mastering both science content and language at the same time.

Reading as a general practice, has become a major concern of teachers, counsellors, researchers, psychologists, government and private establishments and school administrators (Rollnick, 1999; Ayodele, 2011).

Readability continues to be among the most discussed, misunderstood, and misused concepts in reading. It is all too commonly, but erroneously, assumed that a precise numerical score, obtained through the use of readability "formulas," indicates the level of difficulty of a text.

Readability can be expressed as the level of ease or difficulty with which text material can be understood by a particular reader who is reading that text for a specific purpose. Readability is dependent upon both readers and text characteristics. Thus, one important characteristic of a useful, informed definition of readability is that it reflects the interactive nature of the construct. Text and reader variables interact in determining the readability of any piece of material for any individual reader (Harris & Hodges, 1995). The purpose of readability assessment is to effect a 'best match' between intended readers and texts, thus, optimal difficulty comes from an interaction among the text, the reader, and his/her purpose for reading (Chall & Dale, 1995). For example, some books certainly have a lower level of readability than others. However, within narrower ranges of texts the readability or difficulty of texts is not as clear. Some science texts measured to be at fourth-grade readability are easier to read than a fifth-grade readability social studies text. One child might found the science text easier, while another might be more successful with the social studies text. The concept of comprehension is hence of major relevance to education. In the general sense of being educated, an educated person acquires acquired a certain body of knowledge, competence, abilities and skills (Freedle & Carroll, 1992).

According to Freedle and Carroll, being educated implies possessing a capacity for acquiring new understanding and integrating them in some valid way with the knowledge already acquired. Taken at its face value, this statement implies that one is said to be "educated" in any language he or she chooses. English language however, occupies a strategic position in Nigeria education. In effect, one of the major concerns of the school curriculum is the promotion of English comprehension skills at progressively higher levels grammatical, lexical and semantic knowledge (Cappella & Weinstein, 2001). Beyond the process of teaching the child to decode print into some analogue of spoken language, educators have discovered that there still remains the problem of teaching the child to "understand" the language thus decoded (Jeffrey, Mariglia,n Bryan & Naqkuin, 2001). Thus comprehension is the basis of reading. Teaching children how to read and comprehend is the number one responsibility of schools, (Cairney, 1990; Unoh, 1995). Cairney further stressed that no child should leave school without adequate reading ability and judging from the angle of low-income families, the school is the

only hope for their children to attain proficiency in reading and comprehension.

Statement of Problem

Nonetheless, it is very common nowadays that majority of the primary school certificate holders cannot read and write in both English and Yoruba languages. And since these pupils will metamorphous to become secondary school students something should be done at the elementary level before it is too late.

Purpose of Study

This study was, therefore, undertaken to investigate the Readability level of basic six pupils in both private and public schools in Ibadan land. It was meant to investigate the ability of basic six pupils to read their text material, comprehend it and to see whether the text book being recommend for them is too difficult for them or not.

Significance of Study

The significance of any research work is based on the quality of solution it is able to provide. This study l would be of benefit to the primary school pupils in both private and public schools in the sense that it will help to enhancing their readability level. It would enable the stakeholders to know the readability level of the primary school pupils. It will also help the teachers to know that they still have a lot to do if the interest of the pupils is at their heart. It will also help the education planner to make sure that appropriate text is recommended for reading and that competent teachers are employed to handle the English language, knowing fully that English language is a second and borrowed language in Nigeria.

Scope of Study

This study covered three local government areas in Ibadan metropolis and pupils in basic six from private and public primary schools were used for the study.

Literature Review

Ayodele (2012), investigated the readability of basic science and technology textbooks for primary schools used in Ekiti State, Nigeria. Using Flesch-

Kincaid Readability Formula and Cloze test to assess the difficulty index, he obtained different Reading Ease score for different science textbooks for different classes. This suggest that many of students find it difficult to comprehend the science concepts that 12.8 years, 13.2 years and 13.2 years are expected to comprehend. Ayodele's (2012) study also showed that there is a mismatch between pupils' reading level and the readability of Macmillan Basic Science and Technology for Primary school Books 5 and 6 respectively.

Idogo (2011) found that there are significant effects of instructional strategies on pupils' reading comprehension skills and their attitude to reading generally. His study further shows that, pupils in the Preparation Assistant Reflection group had higher mean scores, followed by pupils in the Question Answering Relationship group while pupils in the conventional group had the least score. Whereas, his study indicated that there is significant positive effect of instructional strategies on the verbal ability segment, the low ability segment did show very low level effect of instructional strategies. There was no significant effect of gender on pupils' learning outcomes in reading comprehension and their attitude to reading comprehension. The study concludes that the teaching of reading comprehension in primary schools can produce positive outcome if relevant and appropriate strategies are used in the teaching process.

Letsoalo (1996) and Doidge (1997) revealed that language used in some African science textbooks is too advanced for many of the pupils. To be specific the communicative competences of some Year 12 (17+ years) English second language (ESL) students were comparable to that of Year 5 (10+ years) English-speaking students. In similar studies, Heppner, and Leong (1997) investigated the readability of Biology text materials and the reading ability of sixth form students (US 12th grade) in Brunei. Durassalam, found that the reading materials supplied to the students were more difficult than what they were able to read comfortably.

Bormuth (1966) conducted several extensive studies, to provide evidence of just how much change in a number of readability variables beside just vocabulary and sentence length can affect comprehension. He found out that at the beginning readers relate differently to word variables than do better readers. This underscores the reason why special formulas have been developed for the earliest primary grades such as the Spache formula (1953) and the Harris-Jacobson primary readability formula (1973). Bormuth's study confirmed the curvilinearity of the formula variables. That means their correlation with text difficulty changes in the upper grades.

Dale and Chall (1948) included an adjustment for this feature in their formula-correction chart. This adjustment was also included in the SMOG

formula (McLaughlin 1968), the Fry Graph (Fry 1969), the FORCAST formula (Caylor, 1973), Degrees of Reading Progress (Koslin, 1987) and the ATOS formula (Paul 2003). Some critics of the formulas (Rothkopf 1972, Thorndike 1973-74, Selzer 1981, Redish and Selzer 1985) claim that decoding words and sentences is not a problem for adults. Bormuth's study showed that the correlation between the formula variables and comprehension do not change as a function of reading ability. Bormuth (1969) carried out another research on the readability variables and their relationship to comprehension, which validated the equivalencies of 35%, 45%, and 55% correct cloze criterion scores with 50%, 75%, and 90% correct multiple-choice scores. It also showed that the cloze score of 35% correct answers indicated the level of difficulty required for maximum information gain. Finally, Bormuth produced three different formulas; one for basic use, one for machine use, and one for manual use. All three formulas predict the difficulty of texts for all grade levels using a 35%, 45%, 55%, or a mean-cloze criterion.

The findings of Bormuth about the reliability of the classic variables were confirmed by MacGinitie and Tretiak (1971) who said that the newer syntactic variables proposed by the cognitive theorists correlated so highly with sentence length that they added little accuracy to the measurement. They concluded that average sentence length is the best predictor of syntactic difficulty. Rogers (1962) published a formula for predicting the difficult of spoken texts. So did McLaughlin (1969).

Hypothesis

The null hypothesis for the study was that, there is no significant difference between the readability level of basic six pupils in private and public schools. This was tested at 0.05 level of significance.

Research Question

1. What is the readability level of both public and private basic six primary school pupils?

Research Design

The study made use of descriptive research design of survey type. This study made use of descriptive research design which does not involve direct control of any variable or any experimental manipulation.

Population, Sample and Sampling Procedure

The target population for this study consisted of the basic six pupils in private and public schools within Ibadan North, Ibadan North East, and Ibadan South East Local Government Areas in Ibadan Land. The population size is about 5,000 pupils. The researcher employed the use of a Stratified Random Sampling technique for the purpose of this study. Samples of one hundred and nine (109) pupils were randomly drawn from Basic six private and public schools. Forty-five (45) pupils were selected from three (3) private schools and sixty-four (64) pupils from three (3) public schools. The selected pupils consist of 52 males and 57 females.

Instrumentation

A cloze test was prepared from a reading passage of one hundred and twenty-five (125) words and used for data collection. The instrument consisted of three parts. Part A was the reading passages (with eight underlined syllables used to determine the 'smog index'). Part B contained the Cloze Test Procedure. The Cloze Test Procedure was made up of 127 word passages with fifth (5th) word deletion. The total words deleted were twenty one (21). The minimum and maximum obtainable scores from the passage were 1 and 21. The reliability coefficient of the instrument was 0.78 using test-re-test method.

Procedure

The information was collected by distributing the instrument (reading passage) to the intended respondents (Basic six pupils in private and public schools). The administration took two days. The pupils were instructed and informed of the purpose of the study so as to keep them free of text anxiety and to facilitate the results of the research. The researcher administered the test by himself in the classroom, whereby every participants read the passage, responded to it and their responses were collected without any mortality.

Data Analysis

Data were analysed using Smog Index and Cloze test procedure method and t-test for comparison of readability level among the basic six pupils from private and public primary schools in the selected local government areas of Ibadan land.

Results

Hypothesis 1: There is no significance difference between the readability level of basic six pupils in private and public schools.

Table 1: t-test Table showing the difference in the Readability Level of Basic Six Pupils in Private and Public Schools in Ibadan

Variables	No	X	SD	df	t-calculated	P
Public School	65	8.591	3.972	107	6.394	>0.05
Private Schools	45	15.409	3.003			

Table 1 shows the results obtained from testing hypothesis 1, it is shown that t-calculated is 6.294, degree of freedom is 107 and $p < 0.05$. Therefore, the null hypothesis is rejected and the researcher concludes that there is significant difference in readability level of the basic six pupils in private and public schools.

Smog Index: Smog Index = 3 + 11 (Square root of difficult words)
$$= 3 + \sqrt{8}$$
$$= 3 + 2.82 = 5.82$$

The result of Smog Index value is 5.82

Cloze Test Procedure Table

Table 2 showing the Cloze reading level, score class interval, number of pupils in private school and their percentage (%) score, number of basic six pupils in public school and their percentage (%) score using Modular English Course for Primary Schools Book Six.

Table 2: Cloze Test Method Showing the Results of Readability Level between Private and Public Basic Six Primary Schools in Ibadan

Cloze Reading level	Score Class Interval	Private		Public	
		No of pupil	% score	No of pupil	% score
Independent level	60-100%	35	78	20	31
Instructional level	40-59%	10	22	23	36
Frustration level	0-39%	-	0	21	33
Total		45	100	64	100

Cloze Text score for basic six private pupils showed that thirty five (35) pupils scored 78% at the independent level, ten (10) pupils scored 22% at the Instructional level, and no pupil (0%) in the frustration level. In the public school, twenty (20) basic six pupils scored 31% at the independent level, twenty three (23) pupils at the Instructional level (36%), and twenty one (21) pupils at the frustration level (33%).

Discussion

The results showed that there is significance difference between the readability level of basic six pupils in private and public schools. Based on this finding the null hypothesis was rejected.

The cloze test results from Table 2 corroborates Table1 results which shows that 0% of the basic six private pupils were found in frustration level, while only twenty one basic six pupils from public schools were at frustration level. This finding is in line with Idogo (2011) who observed that there were significant difference in the performance of the pupils in the readability test. These differences resulted from the three different instructional strategies they were exposed to. It could be asserted that the pupils in the private schools were exposed to more effective instructional strategies than those in the public primary schools. . Also, this finding corroborates the findings of Ayodele (2012) on the readability of basic science and technology textbooks for primary schools. Ayodele observed that there was a mismatch between students' reading level and the

readability of Macmillan Basic Science and Technology for Primary School Books 5 and 6.

Implication of Findings

Slog study shows that the readability level of basic six pupils depend mostly on schools and less on pupils. The importance attached to the readability level of basic six pupils can be facilitated by the encouragement given to the pupils by teachers during academic pursuits. Since comprehension is the basis of reading, it implies that the strategy of teaching pupils how to read and comprehend is the number one responsibility of every school.

Conclusion

It can be concluded from this study that the readability level of the selected basic six pupils in private schools is higher than the readability level of selected basic six pupils in public schools within Ibadan North, Ibadan North East, and Ibadan South East Local Government Areas.

Recommendation

This study recommends another or closer look at the English language textbook (Book 6) in use in schools in Ibadan land. It is recommended that Government and educational stake holders should employ experts in English language to handle the teaching-learning of English language right from the primary school level in enhancing the reading culture of the pupils in primary school. Also, more time should be given to reading comprehension on the school time table.

Reference

Ayodele, M. O. (2011). *Readability levels of Integrated Science Textbooks as determinants of the achievement of students in the Junior Secondary Schools in Ekiti State*. Unpublished Ph.D Thesis submitted to the Department of Curriculum Studies, Faculty of Education, University of Ado-Ekiti, Nigeria.

Bormuth, J. R. (1966). Readability: A new approach. *Reading research quarterly, 1*, 79-132.

Cairncy, R. C. (1990). Structures of prose in content areas. *Understanding reading comprehension*, ed. J Flood. Newark, DE: International Reading Association, 161-180.

Cappella, M. A. and Weinstein, F. (2001). Estimating readability with a computer. *The Reading Teacher, 38* (4), 392-395.

Caylor, J. S. (1973). Readability and Prose Comprehension: Continuities and Discontinuities," in James Flood (Ed.) *Understanding Reading Comprehension.*, DE: International Reading Association.

Chall, J. S., & Dale, E. (1995). *Readability Revisited: The New Dale-Chall Readability Formula.* Cambridge, MA: Bookline Books.

Cooper, J. D., Boschken, I., Mc Williams, J. & Pistochini, L. (1998). *Stopping Reading Failure: Reading Intervention for Intermediate Grade Students.*

Dale, E. and Chall, J. S. (1948). Measuring prose difficulty using the Reading scale. *Reading research quarterly, 11,* 660-685.

Doidge, C. J. (1997). *Readability: An appraisal of research and application.* Columbus, OH: Ohio State University Press. Reprinted 1974. Epping, Essex, England: Bowker Publishing Company.

Ezeokoli, M. (1997). *How Readable is your Biology Textbook? Can you be sure?* Proceedings of the Fifth Annual Meeting of the Southern African Association for research in Science and Mathematics Education. Johannesburg, South Africa, 396-400.

Federal Republic of Nigeria (2004). *National Policy on Education.* Lagos: NERDC Press.

Flesch, R. F. (1964). A New Readability Yardstick. *Journal of Applied Psychology. 32,* 221-233.

Fountas, I. C. & Pinnell, G. S. (1996). *Guided Reading: Good First Teaching for All Children.* Portsmouth, NH: Heinemann .

Freedle, A. R. and Carroll, J. F. (1992). *Development of standards of readability: Towards a rational criterion of passage performance.* Washington, D. C.: U.S. Office of Education, Bureau of Research, U.S. Department of Health, Education, and Welfare.

Fry, R. L. (1969). Estimation of the reliability of ratings. *Psychometrical, 16,* 407-424.

Gambrell, L. B. (1996). What research reveals about discussion. In L.B. Gambrell & J. F. Almasi (Eds.). *Lively discussions! Fostering engaged reading.* Newark, DE: International Reading Association, 25-38.

Gray, W.S., & Leary, B.E. (1935). *What Makes a Book Readable.* Chicago, IL: University

Harris, J. B, and Hodges, A. O. (1995). *Development of readability analysis.* Final Report, Project no. 7-0052, Contract No. OEC-3-7-070052-0326. Washington, D. C.: U.S. Office of Education, Bureau of Research, U.S. Department of Health, Education, and Welfare.

Harris-Jacobson, B. (1973). "Predicting accuracy of comprehension from the relative difficulty of material." *Learning and individual differences 2*, 405-422.

Heppner, M. C. and Leong, Y. P. (1997). Teachers' estimate of and measurement of students' reading ability and readability of text materials in English as a second language secondary biology course. *Journal of Applied Research in Education, 1*(2), 31-39.

Hittleman, D. R. (1986). Teaching Children to Read Textbook Illustration. *The Education Digest.* CL. *18*, 48-51.

Idogo, S. O. (2011). *The American Heritage Intermediate Corpus.* New York: American Heritage Publishing Co.

Jeffrey, B., Maviglia, A; Bryan K and Naqkrim, K. (2001). *Why readability formulas fail: Reading Education Report No. 28.* Champaign, IL: University of Illinois at Urbana-Champaign.

Koslin, J. P. (1987). Derivation of new readability formulas (Automated Readability Index, Fog count and Flesch Reading Ease Formula) for Navy enlisted personnel. *CNTECHTRA Research Branch Report*, 8-75.

Lemke, J. (1997). *Cognition, Context and Learning: A Social Semiotic Perspective.* In Kirchner, D and Whitson, J. A. (Eds.), Situated Cognition, Semiotic and Psychological Perspectives, Mahwah: Lawrence Erlbaum, 37-56.

Letsoalo, J. B. (1995). The national assessments in reading: are we misreading the findings? *Phi delta kappan,* 414-430.

MacGuinitie, F. and Tretiak, I. O. (1971). Self-efficacy beliefs in achievement settings. *Review of Educational Research, 66,* 543-578.

McLaughlin, F. (1969). Self-efficacy Beliefs in academic setting. *Educational Review.*

Okonwo, R. E. and Okpara, J. A. (1991). Readability of published dental educational materials. *Journal of America dental association 7,* 937-943.

Paul, K. D. (2003). *Measurement and Evaluation in Education and Psychology*. Boston: Allyn & Bacon.

Peacock, R. W. (1995). The end of legalese: The game is over. *Review of law and social change 13*(3), 519-573.

Redish, C. S. and Selzer, M. A. (1985). Behaviour Modifications of Studying through Study Skills Advice and Self- control Procedure. *Journal of Counselling Psychology, 22*(5) 431 - 436.

Rogers, S. (1962). Effects of maternal employment and non-maternal infant care and Reading Habits at two and four years. *Early Development and Parenting, 3*(2), 113-123.

Rollnick, E. (1999). Foundations of reading instruction. New York: American Book Company. Bloomer, R. H. "Level of abstraction as a function of modifier load." *Journal of educational research, 52*, 269-272.

Rothkopf, J. (1972). *Methodologies for determining reading requirements of military occupational specialties: Technical report*. Alexandria, VA: Human Resources Research Organization, *73, 5*

Selzer, M. S. (1981). *How to assess and interpret survey psychometrics*. The Survey Kit Series, Vol. 8. Thousand Oaks, CA: Sage Publications.

Slavin, D. H. (1995). *Guiding Readers and Writers: Grades 3-6*. Portsmouth, NH: Heinemann.

Spache, A. (1953). Classroom goal structures, social satisfaction and the perceived value of academic tasks. *British Journal of Education Psychology, 67*, 1 -12.

Thordike, R. L. (1974). *Measurement and Evaluation in Education and Psychology*. New York: John-Wiley and Sons Inc., *1*, 1-24.

Ubahakwe, B. B. (1991). "The problem of inconsiderate text." In *Comprehension instruction*, ed. G. Duffey. New York: Longmann, 202-217.

Unoh, G. (1995). How adults read. *Supplementary educational monographs*. Chicago: University of Chicago Press. In Sticht and Armstrong 1994, *45*, 43-50.

Yoloye, R, Okpala, P. N. and Ayodele, M. O. (2012). Grouping students for reading instruction. *Handbook of reading research*, ed. P. D. Pearson. New York: Longman, 885-910.