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An Analysis of the Readability of the Essays of First Year Students of Ghanaian Universities - The Case of University of Cape Coast

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Abstract

In view of the constant complaints of teachers of communicative skills (English for academic purposes) in Ghanaian universities about the unreadable nature of the essays of first year students of Ghanaian universities, an analyses of the readability of the essays of first year students of Ghanaian universities was conducted using University of Cape Coast as a case study. Two hundred and eighty students were selected across four (4) programmes of study namely Business, Arts, Science and Education.

The selected students were made to write an easy on the topic, "Ways of Conserving Electric Energy in the Various Halls of residence of the University of Cape Coast". Electronic forms of the essays were collected and fed to a computer. Using Microsoft word (2007) version, A Flesch-Kincaid Reading Ease analyses of the essays were run. With the aid of SPSS (version 16) frequencies and percentages of the Flesch-Kincaid readability scores were obtained. Other statistical tools like levene's test of equality of variance, a One-Way Analysis of Variance (ANOVA) and t-test were used.

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The study revealed that essays of first year level hundred students of Ghanaian universities are largely difficult to comprehend. Also gender and programmes of study do not significantly influence the readability of essays of first year Ghanaian university students. Several recommendations were made to improve the readability of first year students' essay.

Introduction

Studies into the English language proficiency of university students have generally centered on the ability of students to effectively apply the rules of grammar to enhance their linguist competence. In most of these studies, students' inability or the extent of their ability to apply certain rules of grammar is given prominence. For instance, Gyasi, Nartey and Coker (2011) investigated first year student of University of cape coast knowledge of parts of speech. In this study, it was reviewed that first year students knowledge of parts of speech is shallow, hence their poor performance in language courses.

Yankson, (1994) also mentioned students difficulty in handling tense, spelling and concord. To others, students' writings are characterized by lack of coherence, weak thematic progression leading to flat paragraph and undeveloped themes (Dako, 1997; Appiah, 2002; Adika, 2003). Interestingly, similar concerns are echoed by teachers of communicative skill (known elsewhere as English for academic purposes) in some Ghanaian tertiary institution. However, a few studies, if any, have gone into the readability of the writings of these students whose linguistic competence is so much criticized.

This study sought to investigate the level of readability of essays of first year students of Ghanaian universities using University of Cape Coast (UCC) students as a case study. Readability indexes are tools that are used to estimate the level of comprehensibility of written texts. They also estimate the number of years of education one needs to have to read and understand a text (Kincaid, Fishburne, Rogers and Chissom, 1975).

Some common readability indexes are: Gunning Fog Index, Flesch-Kincaid grade level, Fry Readability Graph and Flesch-Kincaid Reading Ease. They all estimate the readability of a text using factors like number of syllabus per word, number of words per sentence and sentence length. It is important to note that the readability formulas are not absolutely reliable in the determination of the level of comprehensibility of a written text. Davison and Bolt (1996) concedes, "Researchers have found that there are many aspects of readability which the formulas overlook or distort" (p.4).

However the importance of readability formulas in estimating the level of difficulty of a written text cannot be ignored. Ambuster, Osborn and Davison (1985) state that "readability formulas exert a powerful influence on American text books" (p.8). James Chall (1981) confirmed the point when he said, "a vocabulary and a sentence factor together predict comprehension difficult of a written text to a higher degree of accuracy" (p.2). Thus the results of formulas only predict level of comprehensibility of a written text. They do not state facts.

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In this study, the Flesch-Kincaid Reading Ease was used. It was chosen because it is one of the most widely used readability formulas (Doak and Doak, 2010. p 151). The formula is based on the average number of syllables per word and word per sentence (DuBay 2007 p.57.). The Flesch-Kincaid Reading Ease was founded by Rudolph Flesch. The Flesch-Kincaid Reading Ease is a number usually between 0-100 indicating how difficult the text is to read. The higher the number the less difficult it is to read the text. This implies that a document that scores a Flesch-Kincaid Reading Ease of say, 95, is easier to read and comprehend than another that scores 60 or less.

Table 1 shows a Flesch-Kincaid Reading Ease scores and their concomitant grade levels.

Table 1: Flesch-Kincaid Reading Ease scores and accompanying Grade Levels.

Flesch-Kincaid Reading Ease	Grade Level
90-100	5 th
81-90	6 th
71-80	7 th
66-70	8 th
61-65	9 th
51-60	High school Student
31-50	College student
0-30	College graduate
Less than zero	Law School graduate

Adapted from Flesch (1949).

The Flesch-Kincaid Reading Ease can be calculated manually using the following formula:

$$\text{Index} = 206.835 - 84.6(\text{syllabus/words}) - 1.015(\text{words/sentences})$$

The study therefore sought to answer the following two research questions:

1. How readable are the essays of first year University students measured in terms of readability indexes?
2. To what extent do sex and programme of study influence the readability of first year University students' essays?

It is generally perceived in Ghana that Arts students are better placed in terms of English Language proficiency. Additionally, research findings suggest that females are inherently verbally superior to males in the language acquisition process (Macobby and Jacklin, 1974; Quansah, 2002). These were the bases for investigating the influence of gender and programme on readability.

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Methodology

A case study to determine the level of readability of essays of first year level hundred students' of Ghanaian universities was conducted. Two hundred and eighty essays were collected from two hundred students across four programmes namely Arts, Business, Education and Science. A non-proportionate stratified random sample was used to select 280 students, 70 from each programme. The student wrote on the topic, "Ways of Conserving Electric Energy in the Various Halls of residence of the University of Cape Coast".

Using Microsoft Word 2007 edition, a Flesh-Kincaid Reading Ease (FRE) analysis of the two hundred and eight essays was run to determine their reading comprehension levels. With the aid of SPSS (version16), frequency and percentages of the FRE scores of the two hundred and eighty essays were obtained. A one Way Analysis of Variance (ANOVA) was run to ascertain the differences in the FRE mean scores among the various programmes of study. Also, a Levene's test of equality of variance was run to determine whether there is equality of variance between the male and female respondents. Finally, an independent sample t-test was conducted to determine whether there existed a statistically significant difference between the FRE mean scores of the male and female respondents and 0.05 significant level was set as a priori for the study.

Results

Flesch-Kincaid Reading Ease

Table 2 shows the FRE scores of the 280 students' essays collected for the study. The analysis showed that majority of the essays (55%) scored a FRE scores of 30-49. This indicates a fairly difficult level of readability. It implies that one has to be a college student to comprehend these essays (Flesch (1949). Exactly 36% of the essays scored 60-69 FRE which indicates a fairly difficult level of readability. One requires 8th grade to high school education to comprehend these essays.

Table 2: FRE Frequency and Percentage scores of student essays.

FRE	F	Percentage	Interpretation
90-100	0	0	Very Easy
80-90	0	0	Easy
70-79	2	0.7	Fairly Easy
60-69	20	7.1	Standard
50-59	100	36	Fairly Difficult

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30-49	154	55	Difficult
Less than 30	6	1.4	Very Difficult
Total	280	100	

n=280 Mean FRE=48.7
Source: Field Data, 2010.

None of the essays fell into easy and very easy levels of readability. Levels meant for 6th and 5th grades respectively. The mean FRE (48.7) indicates a difficult readability level which is meant for college students. Thus averagely first year university students write at college grade level.

Equal Variance Test

Table 3 shows the result of a Levene's test of equality of variance run to determine whether there was equality of variance between the male and female respondents that will warrant a t-test without any correction factors.

Table 3: Levene's test for equality of variance of male and female respondents.

	Levene's Test for Equality of Variances	
	F	Sig.
Equal variances assumed	0.001	0.974

n=280. p<0.05 Female n(162), Male n(118)
Source: Field Data, 2010.

The result showed that there was no significant variance (sig=0.974) at 0.05 alpha level between male and female in the population hence equal variance was assumed and therefore the male and female FRE could be compared without any correction factor.

Independent t-test of males and females FRE

Table 4 shows means, standard deviation and independent sample t-test between males and females FRE scores

Table 4: t-test result of the FRE mean scores of male and female respondent.

Sex	N	Mean	Std. D.	Mean difference	t-ratio	Sig.
Male	162	48.1393	8.56	1.868	1.241	0.217
Female	118	50.0077	8.49			

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n=280 p<0.05

Source: Field Data, 2010.

The result showed that the female respondents scored a FRE mean of 50 (SD. 8.49) which indicates a fairly difficult readability level and the male respondents scored a little above 48 FRE mean (SD. 8.56) indicating difficult readability level. Both readability levels, are however, meant for college students. Although the female FRE mean score was slightly above that of the male, there was no statistically significant (sig.=0.217) differences between the male and female FRE mean scores at 0.05 alpha level.

Differences in the FRE Mean Scores among the Various Students' Program of Study

The Table 5 shows means, standard deviation and One-Way Analyses of Variance (ANOVA) of FRE among the various program of study.

Table 5: One Way ANOVA showing differences in the FRE mean scores among the various programmes of study.

Programme of study	n	Mean (FRE)	Std. Deviation	F-ratio	Sig
Education	70	51.4	8.33776	1.851	0.141
Business	70	50.8	5.92867		
Sciences	70	49.3	8.37918		
Arts	70	47.1	8.75912		
Total	280	48.6730	8.47420		

n=280 p<0.05

The result showed that education had the highest FRE mean scores of 51.4 (SD= 8.3) indicating a fairly difficult readability level. Business followed closely with a FRE mean of 50.8 (SD= 5.9) also indicating a fairly difficult level of readability. However, whereas education students write at high school grade level business students write at college grade level. Science and Arts scored 49.3 (SD=8.4) and 47.1(SD=5.8) respectively. Both indicated a fairly difficult level of readability. Thus science and Arts students write at college grade level.

A One-Way Analyses of Variance (ANOVA) was run to determine whether there existed a statistically significant difference in the FRE mean scores across the various programs of study. There was, however, no statistically significant difference (sig=0.14) among the FRE mean scores across the various programmes at 0.05 alpha level.

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Discussions

Essays of first year students were generally difficult to read and understand. This was seen in the fact that fifty five percent (55%) of the two hundred and eighty (280) essays was difficult to read and understand when measured in terms of Flesch-Kincaid Reading Ease formula and thirty six percent (36%) was fairly difficult to read and understand. Thus, ninety one percent (91%) of the essays were generally difficult to read and understand when measured in terms of Flesch-Kincaid Reading Ease formula. Interpreted in terms of grade level, one has to be a college students or college graduate to comprehend the essays of first year students (Flesch 1949, p.149).

The second major finding of the study was that gender does not significantly influence the readability of essays of first year university students. In the study, the female FRE mean score (50) was slightly above that of the male (48.14). The difference in the mean scores was not significant. Both male and female students write at the college grade level. This finding is contrary to existing findings that suggest that females have a better linguistic competence compared to their male counterpart (Macobby and Jacklin, 1974; Quansah, 2002).

The study further revealed that program of study does not significantly influence the readability of essays of first year students of Ghanaian universities. Education students recorded the highest FRE mean scores of 51.4 indicating a fairly difficult readability level. Business followed closely with a FRE mean of 50.8 also indicating a fairly difficult level of readability. However, whereas education students write at high school grade level business students write at college grade level. Science and Arts scored 49.3 (SD=8.4) and 47.1 (SD= 5.8) respectively. Both indicate a fairly difficult level of readability. Thus science and Arts students write at college grade level.

Although the difference across these programmes is not statistically significant, it is not surprising that Arts students produced the most difficult essays in terms of readability the since in Ghana, they are not only generally perceived to be better placed in terms of linguistic competence compared to students of other programmes but are also identified with habitual use of poly syllabic words, a factor that contributes to difficult text comprehension.

Conclusions and Recommendations

The study concluded that not only are essays of first year students of Ghanaian universities difficult to read and understand but also gender and program of study do not significantly influence the readability of the essays of first years level hundred students of Ghanaian universities.

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It is therefore recommended that first year students of Ghanaian universities should be taken through courses in plain language to equip them with the skills of writing readable essays. Furthermore, Readability laboratories and clubs should be established in all Ghanaian universities and equipped with the needed logistics. It must be made compulsory for all first year students to use these laboratories and join these clubs which would eventually improve their writing skill.

Interestingly, Rudolf Flesch who had a major role in readability gaining importance and popularity became interested in the subject when he was the assistant in a college readability lab. No wonder he wrote his P.HD in educational research and his dissertation focused on readability (DuBay 2007, p.96). Thus students would highly benefit when they join readability labs and clubs.

DEDICATION

This study is dedicated to the newly created Department of Communication Skills.

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