



READABILITY AND INSTITUTIONAL DISCOURSE: AN ANALYSIS OF UNIVERSITY OF CAPE COAST VICE-CHANCELLORS' REPORTS

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ABSTRACT

At the end of every academic year, Vice Chancellors of public universities in Ghana present a report on the activities of their individual universities over the year. Because these reports are made public, they are not only meant for university staff but also others who are interested in the activities of the university. This research sought to determine the readability of Vice Chancellors' reports over a period of five years, using the University of Cape Coast as a case study. Narratives were sampled from these reports and a readability index analysis was run using the Flesch Reading Ease formula. One sample T-test was computed to ascertain whether significant differences existed across the reports. Eta-square was employed to determine the magnitude of effect size where significant differences existed. The mean readability scores of these reports were compared to standard Flesch Reading Ease scores of public documents to ascertain the level of reading comprehension difficulty of the reports. The study revealed that the reports are very difficult to read and that there are statistically significant differences across their readability. The researcher recommended that authors of the report use plain language to enhance ease in the understanding of the reports.

Keywords: *readability, Vice-Chancellor's reports, Flesch Reading Ease, Gunning Fog, Flesch Kincaid Grade Level, University of Cape Coast*

INTRODUCTION

As the chief executive, principal academic and administrative officer of the University of Cape Coast, the Vice-Chancellor (VC) is required by law to provide detailed and substantive report on the activities and challenges of the University at the end of every academic year. Essentially, a Vice-Chancellor's Annual Report provides an overview of the extensive efforts of the institution in research and other important issues instrumental to the achievement of the university's mission and aims. It is also a means of demonstrating the University's confirmed commitment to first-rate academic research via distinctive inter and trans-disciplinary approaches.

The report often highlights the University's significant progress in a given academic year coupled with adequate information on taught and research courses and also a wide-range of disciplines including, human biology, nursing, medicine, physics, agriculture, tourism, counselling, educational management, information and communication technology, modern languages, history, geography, regional planning and management etc.(UCC, 2016).



Unequivocally, the provision of the Vice-Chancellor's Annual Report gives the institution's stakeholders, management and students a sense of pride and satisfaction in relation to the University's achievements. In addition, it provides the public and the University community with information on significant progress of the academic year under review. Such information covers institutional records on significant progress and achievements in research and education, and outstanding accomplishments made by the student body both in academics and in extra-curricular activities.

Expatriating the aforementioned, Fonseca and Dias (2009) intimated that an annual report also serves the purpose of disclosing vital information to various stakeholders; hence it is imperative that great care is exercised in preparing it. This is important because such a report could serve as a means of promoting the competitive choice of the institution to the general public since it contains the University's focus, values, objectives, and other relevant information which could have significant impact on the institution's image.

Addressing the issue from another perspective, Rahman (2014) posits that an annual report provides a yardstick or basis upon which readers could make informed judgement for decision making purposes; hence, the relative ease with which readers can comprehend such reports is of paramount importance. In fact, according to Rahman (2014) some researchers have used the level of readability of annual report to measure the effectiveness of an institution's written communication.

In this study, the researcher sought to evaluate the readability of Vice-Chancellor's Annual Reports of the University of Cape Coast, Ghana. The researcher employed the Flesch Reading Ease index for the study which was underpinned by two research objectives. Since each discipline has its peculiar way of using language, and language use in written communication determines the readability of a text, the first research objective was to establish the level of readability of reports across faculties/schools. Second, the researcher sought to determine whether there is a statistically significant difference across Flesch Reading Ease (henceforth FRE) mean score of faculties/schools compared to the Standard FRE of public documents. In general, the FRE index outputs a number from 0 to 100 a higher score indicates easier reading. As a rule of thumb, an average document (referred to as having standard readability), has an FRE score between 60 – 70. Therefore, the second objective was to determine whether or not there were statistically significant difference in the readability of sections of the VC's Report authored by the individual faculties and schools, compared to FRE score of 60 – 70.

Structure of University of Cape Coast Vice-Chancellor's Report

The University of Cape Coast Vice-Chancellor's report has three major parts. The first part is the forward which is basically a statement by the Vice-Chancellor. The statement highlights the goals and objectives of the university and ends with a call on all university staff to work assiduously in the coming new year to enhance the image of the University (UCC, 2016).



The second part of the VC's Report deals with a compilation of reports from all academic departments and units captured under faculties, centres, schools and institutes arranged alphabetically. Each academic department or unit's report begins with an introduction (narrative) which entails the academic programmes of the department or units as well as the degree or certification offered by it. It then presents a list of the teaching staff of the department or unit highlighting their research interest and their publication in the year under review (UCC, 2016).

The final part of the report deals with other supporting establishments in the University and their roles as well as their achievements in the year under review. Such supporting sections include libraries and halls of residence of students. It is obvious that what is called a Vice-Chancellor's report is basically a compilation of reports from academic and non-academic sections of the University endorsed by the Vice-Chancellor; hence, the name Vice-Chancellor's Reports.

In this study, a corpus of narratives from Vice-Chancellor's report over a period of five years was created. The selections of the narratives were done on the bases of departments that constitute the faculties/schools. Data analysis was done at faculty/school level.

THEORITICAL FRAMEWORK OF READABILITY

Readability, according to Stephens (2000) refers to the ease with which a document can be read. In a similar manner, Gretchen et al., (2000) state that readability, the "ease of reading words and sentences," is an attribute of clarity. Pikulski, (2013) gave a more explicit definition of readability that is in line with more recent research and theory by stating that readability is the level of ease or difficulty with which a text material can be understood by a particular reader who is reading that text for a specific purpose.

Readability indexes, which are mathematical formulas, were developed solely to assess the suitability of written text for intended readers. There are many readability formulas that are used to test the readability of texts in the English language. Some popular readability formulas include the Gunning Fog index, Smog index, Flesch Kinkaid Grade Level index, Flesch Reading Ease index, Fry Graph readability index and Spache readability index. All these formulas or indexes estimate the level of reading comprehension difficulty of a text by stating how many years of education a reader requires to comprehend a given text. *According to* Macdonald, McMillan, and Kerr (2010), these formulas often use word length, sentence length, and polysyllabic frequency in estimating the readability of a text. However, it should be noted that readability formulas cannot measure features like enjoyment or interest a reader derives in a particular reading (Stephens, 2000).

In this study, the FRE formula developed by Rudolph Flesch in the 1940s is used. It predicts reading ease on a scale from 1-100, with a higher score indicating easier reading. An average document has FRE score between 60 –70. As a rule of thumb, scores of 90-100 can be understood by an average 5th grader. For 8th and 9th grade students, they can understand documents with a score of 60-70; and college graduates can understand documents with a score of 0-30. An FRE score of 60 – 70 denotes a document classified as having 'standard' readability. This formula was chosen for the study because it is not only one of the popular formulas but is also very efficient and favoured by researchers (Courtis, 1986; Flory et al. 1992; Steven et al. 1992; Schroeder and Gibson, 1990; Lehavy et al. 2009; Worthington, 1978).



A number of studies have evaluated the readability of annual reports of corporate entities using various readability indexes. For example, in a study conducted in Malaysia, Courtis & Hassan, (2002) examined the reading ease between English and Chinese versions of 65 corporate annual reports in Hong Kong coupled with the English and Malay versions of 53 annual reports in Malaysia using Flesch and Yang Formulas for Hong Kong and Flesch and Yunus Formulas for Malaysia. Though the results were not conclusive, they thus provide a tentative impression that the indigenous language version is easier to read than the English-written versions. Findings also revealed that the English passages in Malaysian annual reports are easier to read than the English passages in Hong Kong annual report. Similarly, Abu Bakar & Ameer, (2011) also examined the readability of annual reports on Corporate Social Responsibility (CSR) for a sample of listed companies. Abubakar and Ameer employed readability formula and discovered that the extent of syntactic complexity influences the comprehension of CSR report. In essence, the higher the level of syntactic complexity in a given report of a company under review, the less comprehensible the report would be. They also examined the relationship between readability and companies' performance and findings revealed that the executives or directors of corporations with poor performance often render their CSR report with difficult language which often results in confusion for readers.

In spite of the inestimable value of readability analysis to determine the level of reading comprehension difficulty of a document, some scholars have criticized the way readability formulas work. For example, some argue that readability formulas do not take into consideration reader centered-factors such as motivation, interest, and level of one's intelligence, which are key factors in text comprehension (Bernard and Sparks, 1993). Others such as Bailin, and Grafstein, (2016) and Garvey et al., (2001) also assert that text-centered features such as legibility of print, font style and size, diagrams, charts, graphs, which enhance text comprehension, are also ignored by readability indexes. In spite of these, however, the immense benefits derived from readability analysis of texts is inestimable.

RESEARCH METHODOLOGY

Data collection

As stated earlier, the Vice-Chancellor's Report is a compilation of reports from academic departments and other supporting units in the university. Each academic department's report is preceded by a narrative which borders on the activities of the department. This is followed by a list of lecturers and their research areas and publications. In this study, a corpus of the narratives of all the academic departments captured under faculties and schools of the University of Cape Coast was created. Only eight out of the eleven faculties/schools were used for the study. The reason was because the other three faculty/schools were recently created and so academic departments under these do not have reports in some of the five Vice Chancellor's report used for the study. Five editions of the Vice Chancellor's Report (41st, 42nd, 44th, 46th, and 47th) of the University of Cape Coast were used for the study. The data collection and processing procedure involved three stages. First, the 41st, 42nd, and 44th editions which were in printed format were scanned using HP deskjet 2050 J10 series into electronic format (pdf).

Scanning the printed copies of the reports to digital (electronic) format presented tremendous challenges because of the quality of paper used for the printed reports. Hence, several of the pages of the electronic format generated (even at high resolution) were not of the same quality as



the printed version in the printed reports. Hence, several of the pages had to be re-typed in order to have accurate copies. Thereafter, all five reports (each was over 200 pages) that were electronically generated (pdf) had to be proofread and edited.

The second stage involved conversion of the electronic pdf documents into Microsoft word. The third and final stage involved computing readability scores of the texts using Microsoft word 2013 edition.

The scanned issues of the report, together with the 46th and 47th reports, which were already electronic, were converted to Microsoft word document using the word document converter Readiris Corporate 14 edition. After the conversion to word documents, the passages were edited to ensure that they conform to their original forms.

Data Analysis

Data analysis was done in tandem with the research objectives outlined in the introduction of this study. After obtaining the FRE scores of the narratives using Microsoft Word 2013, SPSS version 22 was used to compute descriptive statistics (mean, standard deviation, minimum and maximum values of the FRE scores. Finally, one sample T-test was used to determine the difference in FRE scores across faculties/schools reports setting a benchmark of FRE score of 60 (see Fakhfakh, 2015). The formula for calculating FRE is given below:

The Reading Ease Readability Formula

$$RE=206.835-(1.015*ASL)-84.6*ASWE$$

RE= Readability Ease

ASL= Average Sentence Length (i.e., the number of words divided by number of sentences)

ASW= Average number of syllables per word(i.e., the number of syllables divided by the number of words.

The output, i.e., RE is a number ranging from 0 to 100. The higher the number, the easier the text is to read.

- i. Scores between 90.0 and 100.0 are considered easily understandable by an average 5th grader.
- ii. Scores between 60.0 and 70.0 are considered easily understood by 8th and 9th graders.
- iii. Scores between 0.0 and 30.0 are considered easily understood by college graduates largely considered acceptable.

RESULTS AND DISCUSSION

Descriptive statistics of the reading ease of reports according to faculties/schools

Table 1 presents the descriptive statistics of the ease of reading reports according to faculties and schools. Apart from the school of biological sciences (M = 30.11; SD = 13.66) and the Faculty of Arts (M = 35.02; SD = 7.97) which recorded mean FRE scores above 30, all other faculties and schools recorded FRE scores below 30. Hence, only the reports from the faculty of Arts and School of Biological Sciences could be categorized as difficult (My Byline Media, 2015) when



measured on the FRE scale. All the others were extremely difficult to read. In addition, reports from the School of Business recorded the highest maximum score (61.60) which is categorized as normal. Yet, the standard deviation was the highest (19.95) suggesting a large variability in the reports from this school. In other words, although School of Business recorded the highest maximum FRE score suggesting easy to read reports, the large standard deviation implies that several of the reports from this school recorded low FRE values indicating very difficult to read texts. On the other hand, although Faculty of Arts recorded the second smallest maximum FRE, the standard deviation was the lowest. This implies that the reports from the Faculty of Arts were generally of the same reading ease as the mean.

It is of interest to note that Faculty of Education scored the second least mean FRE score ($M = 18.99$; $SD = 11.55$). It implies that the reports from Faculty of Education are the second most difficult to read. This is a cause for worry because Faculty of Education is supposed to train teachers for the various schools in Ghana. Such teachers are given certificates to teach at different levels including early childhood developmental stages. Since a student could only be as good as his teacher, the likelihood of these would-be-teachers to teach after graduation using difficult sentences is high. The implication is that the students of these would-be-teachers would likely struggle to read and understand the notes given to them in class.

In all, the mean FRE score for the entire five reports was 25.84 ($SD = 12.27$), with a maximum of 61.60. This suggests that the VC's reports were generally very difficult to read when measured in terms of the Flesch Reading Ease index.

Table 1: Descriptive Statistics for the Flesch Reading Ease (FRE)

Faculty or School	Fleisch Reading Ease (FRE)				
	N	Mean	SD	Min	Max
Arts	53	35.02	7.97	24.50	49.20
Education	57	18.99	11.55	.00	44.10
Social Science	32	17.93	8.03	3.20	37.50
Agriculture	29	21.35	13.50	3.40	58.20
Biological Sciences	32	30.11	13.66	3.30	58.10
Business	14	29.72	19.95	.00	61.60
Medical Sciences	68	26.05	13.76	.00	54.60
Physical Sciences	33	27.58	9.70	12.60	53.40
Overall	318	25.84	12.27	.00	61.60

Source: Fieldwork, 2015

The ease of reading the reports compared to established standards of readability scores

One-sample T-test was conducted to compare the differences in reading ease of the reports from the various faculties and schools with standard reading ease scores. Preliminary analysis was performed to ensure no violation of the assumption of normality of distribution. In addition, an FRE score of 60 was used as the standard because according to literature, an FRE score of 60-70 is desirable for English texts (Fakhfakh, 2015). The results are presented in table 2.



Table 2: One-sample T-test to compare the ease of reading reports from different Faculties and Schools with standard FRE scores

Faculty or School	FRE			Mean <i>dif dif</i>	T	d.f.	Sig	Effect size
	N	\bar{X}	Σ					
Arts	53	35.02	7.97	24.98	22.83	52	.000	0.64
Education	57	18.99	11.55	41.01	26.81	56	.000	1.05
Social Sciences	32	17.93	8.03	42.07	29.65	31	.000	1.07
Agriculture	29	21.35	13.50	38.65	15.42	28	.000	0.99
Biological Sciences	32	30.11	13.66	29.89	12.38	31	.000	0.76
Business	14	29.72	19.95	30.28	5.679	13	.000	0.77
Medical Sciences	68	26.05	13.76	33.95	20.35	67	.000	0.87
Physical Sciences	33	27.58	9.70	32.42	19.21	32	.000	0.83
Overall	318	25.84	12.27	34.24	46.30	317	.000	0.87

NB: Test value = 60

Source: Fieldwork, 2015

From Table 2, the one-sample T-test showed that there was significant difference in FRE scores between each of the reports from each Faculty/School on one hand, and the standard FRE score (60-70) recommended for public documents. The mean difference in FRE score between Faculties/Schools and the test statistic ranged from 24.98 (least difficult) in the Faculty of Arts to 42.07 (most difficult) in the Faculty of Social Sciences. In addition, the overall mean FRE score (M = 25.84; SD = 12.27) for all the reports under consideration was also significantly different (lower) from the test FRE score of 60. The mean difference between the overall FRE score from all faculties and schools and the test statistic was 34.24.

The effect size, which measures the magnitude of the difference between the mean FRE scores and the standard (FRE of 60), was very large in each case. This implies that the reports from all the faculties/schools were far above the standard readability for public documents. The implication of this is thus profound since the objective of the Vice-Chancellor’s reports is to provide review of activities of the university during the previous year. Such information is geared towards the public and the university community. Several would-be-students or even investors may fall on the report of developments in the University and thus be informed with regard to choosing to apply for admission or do business with the University. Hence, difficult texts written by way of reports defeat the purpose of the report considering it from the context of a section of the target populace for which the report is written. In contrast, literature such as Reader's Digest magazine has a readability index of about 65, Time magazine scores about 52, an average 6th grade student's written assignment (age of 12) has a readability index of 60–70 (and a reading grade level of 6–7), and the Harvard Law Review has a general readability score in the low 30s. In comparison, the Vice-Chancellor’s report is as difficult to read as Harvard Law Review. For a country where more than 50 percent of the population cannot read and write, writing such difficult reports will only discourage the audience from reading them.



CONCLUSION AND RECOMMENDATIONS

Summary

The study explored the readability of five editions of Vice Chancellor's Report (41st, 42nd, 44th, 46th, and 47th) of the University of Cape Coast. The Flesch Reading Ease readability index was used to determine the ease of reading these reports. In all, the reading ease of reports from eight faculties/schools was determined using Microsoft's office word 2013. The resulting reading ease scores were then subjected to SPSS (version 22) analysis to compute frequencies and to run one-sample T-test to describe and determine differences in the ease of reading the reports according to faculties/schools.

Key findings

The main findings from this study are as follows:

1. Apart from reports from two faculties (Arts and Biological Sciences) which were interpreted as 'difficult' to read according to the Flesch Reading Ease index, the reports from all other faculties and schools were 'extremely difficult to read' when measured by the Flesch Reading Ease index.
2. In addition, the one sample T-test analysis showed that the reports from all the faculties/schools were above standard readability level (FRE score of 60-70) for public document. The difference in the ease of reading these reports from the various faculties/schools was very large in comparison with the standard score for public documents.

CONCLUSION

In this study, the readability of Vice-Chancellor's reports for a period of five years was evaluated using the FRE readability formula. The researcher sought to compare the readability of the Vice-Chancellor's reports to the established standard FRE score for public documents and to determine whether statistically significant differences exist across the readability of these reports. The study revealed that the reports are difficult when compared to FRE score of 60-70 which is the standard score for public documents. The study also revealed statistically significant differences across the readability of the reports when considered in terms of faculties/schools/departments. The researcher recommends that since Vice-Chancellors' reports are very key in marketing the university nationally and internationally, authors of this document should use plain language and avoid unnecessary use of polysyllabic words to enhance the readability of the documents.

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