

Readability Index on various Ghanaian News

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Abstract

The media is a potent means of information in every democratic dispensation since it controls the masses' perceptions on virtually all aspects of human life. Therefore, news items must be presented in simple to understand terms. In this paper, the readability of four Ghanaian newspapers (two states – owned, two private owned) were evaluated. Each of the two private-owned newspapers was affiliated to the two dominant political parties in Ghana (NPP, NDC). Non-proportionate stratified sampling was used to sample 215 newspaper articles (editorials) from these four newspapers. Fog readability index was used to calculate the readability of the selected articles, and frequencies and percentages of the readability scores were computed. Independent sample t- test was used to compare readability across the categories of newspapers. The results revealed that the four newspapers are difficult to read such that on the average, one must have attained at least a college degree in order to read (based on Fog's index) and understand. In addition, the private-owned newspapers (Daily Guide and Enquirer) were relatively easier to read than the public-owned ones albeit the difference is rather small. Finally, the perceived pro – NPP newspaper (Daily Guide) was relatively easier to read than the perceived pro – NDC newspaper (Enquirer). The findings suggest that these newspapers are not communicating effectively with the masses suggesting a need for further editing to achieve this aim.

Key words: readability index; newspapers; political parties; fog index and affiliated.

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1. Introduction

The media today has become one of the most effective and widely used channels for disseminating information around the world. The effectiveness and speed of the media make it an important tool capable of offering constructive assistance to nation building or negative influence to the detriment of national development.

Recently, however, there has been agitations among stakeholders, parents and teachers about the downward trend of the linguistic competence of students in our schools, colleges and universities. Research indicates that English language proficiency in the schools, and the colleges is abysmal [1], and that many school leavers can hardly read and comprehend English. This means that the valuable information carried by these newspapers is likely to prove unbeneficial to Ghanaians, if they are not written in plain language that the average Ghanaian will read and understand. It is against this background that the researchers conduct an inquiry into the level of reading comprehension difficulty of Ghanaian newspapers through the application of readability indexes. In doing this, the researchers employed the Gunning Fog readability, which is one of the most popular readability formulas [13]. Besides the low English proficiency among the masses of Ghanaians, it has been opined [10] that the Ghanaian press uses *unwieldy, officious, bulky, authoritarian* grammatical expressions. Hence, the objective of the newspapers to disseminate information to the general public will be missed. Yet, only few studies have been conducted in the area of readability of newspapers in Ghana. The objective of this research was therefore to fill the gap in this area and contribute to improving the readability of Ghanaian newspapers. Thus, the objectives of this paper are to ;

- Determine the readability of Ghanaian newspapers using the Gunning Fog readability index
- Determine whether there are significant differences in readability between the state-owned newspapers and the private-owned newspapers.
- Determine whether there is significant difference in readability between pro – NPP and pro – NDC newspapers

1.1 It is hypothesized that

- Ghanaian newspapers are difficult to comprehend when measured in terms of readability formulas and that
- There is no statistically significant difference in the readability of Ghanaian newspapers.

This research concentrated on only the editorials of the selected newspapers. The reason was because Editorials deal with different themes like sports, commerce, entertainment, education, politics and others. Thus, they form a fair representation of other articles in newspapers. In addition, the researchers concentrated on four newspapers in the country namely: *Daily Graphic, Ghanaian Times, Daily Guide* and the *Enquirer*. The *Daily Graphic* and *Ghanaian Times* are state owned and are the most widely read and patronized according to the newspaper vendors, media houses and seasoned journalists contacted. The *Enquirer* and *Daily Guide* are perceived to be pro NDC and NPP respectively. Since these are the two major political parties in the country, it is reasonable to assume that their sympathizers will read these papers.

1.2 Review of Related Literature

1.3 Newspaper editorial and its structure

Editorials are newspapers' official stance on specific issues and can cover politics as well as social or cultural issues [4]. All newspaper editorials are set off with a headline or a title, which serves the purpose of getting the reader's attention [5]. Prototypically, an editorial contains a headline, a date, a lead paragraph and sometimes a byline but the newspapers under review do not have bylines as part of their structure. The most important of these components is the title which highlights the main idea of the article.

1.4 Readability of Newspapers

The concept of readability encompasses the idea of ease of reading, and how interesting and attractive the paper is among other things [6]. The readability of a newspaper could be viewed from either the reader's perspective or the writer's. For example, [7] has discussed the readability of a text from a reader's perspective while [8] has discussed the readability from the writer's perspective. Merging the two views of readability [9] has described readability from the perspective of interaction between the text and the reader. Dale and Chall (1949, cited in [6]) point out that readability is the sum of the total of all those elements which a given piece of written material has, that affects the success of a group of readers. It is obvious then that comprehensibility is important in readability. In order to measure the readability of texts, several readability indexes have been developed over the years. Each has its own thrust. Hence, consistency with one type of readability index is vital [10]. Amongst these indices are: The SMOG Readability formula, Flesch's Grade level, Flesch-Kincaid index, Robert Gunning's Fog index, New Dale-Chall formula and Spache readability formula [12]. In this paper, the Gunning fog index is employed. The Gunning Fog Readability index was developed by Robert Gunning (1952) in reaction to his observations that high school graduates were unable to read and comprehend newspaper articles meant to be read by them. His opinion was that most newspapers and business documents were full of "fog" and unnecessary complexity. This, according to him, made it difficult for most high school graduates to read. He viewed the problem as emanating from the writing style of writers. The Fog Index level translates the number of years of education a reader needs to understand a written material. He proposed 7 or 8 years as ideal. He considered anything beyond 12 years as too difficult and hard for most people to read. In addition, he proposed that short sentences in plain English achieve better readability scores than long sentences written in complex language. It must be noted that not all complex or long words are difficult since some short words can be difficult and unfamiliar if they are not used very frequently. Several of the studies on readability of newspapers have suggested that they are too difficult to read [13,14,15]. They have largely required more than 13 years of formal education in order to be able to read and understand. Regardless of the medium used (reports, brochures, proposals, newspaper editorials or newspaper business columns, business), writers must be vigilant in their attempts to communicate effectively with their reading public.

1.5 methodology

1.6 Research Design, Sample and Sampling Techniques

The study employed quantitative research approach of research in collecting and analysing data. The researchers chose quantitative research design because the purpose of this paper was to describe readability. This method enabled the researchers to identify and present in clear terms, the distribution and frequency of the chosen variables in order to clearly validate the findings of the study. Three hundred and sixty-two (362) newspaper editorials from *Daily Graphic*, *Ghanaian Times*, *Daily Guide* and *Enquirer* over the period of September 2016 to December 2016 was the target population of newspaper articles. These newspapers were those available at the University library at the point of data collection. The researchers therefore settled on these for the study because they were up to date for four months, compared to the previous months where some days were not available because they were missing from the library. The sampling technique used for the study was the non-proportionate stratified sampling procedure. This was to reduce bias that could be introduced into the sample as a result of non-equal numbers of the newspapers in each category in the entire population of newspapers under discussion. Hence, a total of two hundred and fifteen (215) newspaper editorials formed the sample size of the study (*Daily Graphic*, 49; *Ghanaian Time*, 62; *Daily Guide*, 50; and *Enquirer*, 54).

1.7 Data Collection

Two hundred and fifteen (215) newspapers from the main library of the University of Cape Coast were collected. Photocopies of all the editorials of these were then made. Next, these editorials were scanned because the soft copies were needed for readability index analysis since readability score calculations were to be made using MS Word. After scanning the documents, the passages were edited to ensure that they conform to their original form. In addition, the texts were passed through a stage referred to as preparation stage, in line with guidelines suggested by [16]. This stage involved removing or excluding punctuation marks that would have otherwise confused and mislead the computer in the calculation. Since the computer interprets any period (full stop) as the end of a sentence, embedded punctuation such as periods that were used for abbreviations were removed. In addition, texts that were not in full sentences, such as titles, headings, and bulleted points that are not full sentences were excluded. This preparatory stage was important in order to achieve accurate readability scores.

1.8 Data Analysis

Data was analysed in tandem with research questions outlined in the study. Data analyses were in two stages. First, readability scores were computed using readability calculator on <http://www.readabilityformulas.com>. Afterwards, SPSS (Version 24) was used to generate frequencies and percentages of the readability scores. Independent sample t- test was used to compare means and Levene's test was run to determine homogeneity of variances in the means.

1.9 Discussions and Analysis of Data

1.10 Readability of Ghanaian newspapers using the Gunning Fog readability index

Table 1 presents descriptive statistics of the newspapers under review. There were four (4) Ghanaian newspapers whose readability was reviewed. These were the *Ghanaian Times*, *Daily Graphic*, *Daily Guide*, and

the Enquirer. A majority (28.8% out of 215) of the articles were from the Daily Guide while the Ghanaian Times contributed the least (22.8%).

Table 1: Descriptive Statistics of the News Papers

Variable	Categories	Freq.	Percent
Name of News Paper	Ghanaian Times	49	22.8
	Daily Graphic	50	23.3
	Daily Guide	62	28.8
	Enquirer	54	25.1
Types of News Paper	Public	111	51.6
	Private	104	48.4
Perceived Party Affiliation of News Paper	Pro – NPP	50	23.3
	Pro – NDC	54	25.1

The newspapers were further grouped according to their types based on their ownership as public or private. The public newspapers were the Daily Graphic and the Ghanaian Times.

The private newspapers constituted the Daily Guide and the Enquirer. A majority (51.6%) of the articles were from the public newspapers. In addition, the private newspapers (Daily Guide and Enquirer) were grouped according to their perceived party affiliations as either pro – NPP (48.1% out of 104 private newspaper articles) or pro – NDC (51.9%). Thus, the majority of the private newspaper articles were from the pro – NDC paper (the Enquirer). This categorization was done based on the newspaper’s ownership and reportage. Hence, in the Ghanaian setting, the Daily Guide is known to speak on and for the NPP.

On the other hand, the Enquirer is known to sympathize with the NDC. The Daily Graphic and Ghanaian Times were not classified as politically affiliated because of their nature of ownership (state – owned). Hence, although the government maintains a close contact with editors, briefing them (editors) on government policies, there seem to be fairness of their reportage.

This is the case because the government has occasionally reprimanded them for unflattering press, which suggest fairness in reportage [20]. Table 2 presents Gunning Fog scores of four (4) Ghanaian newspapers (Daily Graphic, Ghanaian Times, Daily Guide, and the Enquirer).

It is observed from Table 2 that an individual must have attained over 15 years of formal education in order to be able to understand any of the four newspapers. The Daily Guide required the least mean number of years of formal education ($\bar{X} = 15.53$; $\sigma = 1.77$). All other three (3) newspapers required about 17 years ($\bar{X} = 16.55$; $\sigma = 2.00$) of formal education in order to be able to understand the text at first reading. This implies that a person must have reached at least level 300 in a tertiary institution in order to be able to understand any of the newspapers at first reading. This finding is consistent with earlier findings of numerous authors [13], [15], [19].

Table 2: Descriptive Statistics for gunning fog readability indices

Newspaper	Gunning Fog				Skewness		Kurtosis	
	Mean	SD	Min	Max	Statistic	Std. error	Statistic	Std. error
Daily Graphic	16.59	1.78	12.5	20.34	.662	.237	1.034	.469
Ghanaian Times	16.58	1.79	12.47	20.82				
Daily Guide	15.53	1.77	10.65	21.94				
Enquirer	16.47	2.44	11.21	22.72				
Total	16.31	2.00	10.65	22.72	.36	.17	.44	.33

Considering that the purpose of most newspapers is to help readers become informed citizens and make better decisions by providing facts, it is important that such information is presented in a way that readers can easily understand. By definition, the Fog index suggests that a score of 7 or 8 is the maximum required for a text written for the general public such as newspapers. By considering the Fog scores for the newspapers under review, none of the newspapers scored readability within the suggested score for public documents suggesting that all the newspapers are far difficult to comprehend by their target audience. Therefore, the first null hypothesis which stated that Ghanaian newspapers are difficult to understand was accepted.

2. Differences in readability between public and privately owned newspapers

Table 3 presents an independent sample T-test to compare readability between public (Daily Graphic and Ghanaian Times) and private newspapers (Daily Guide and the Enquirer) in Ghana using the Fog index. Preliminary analysis was performed to check for the assumptions of normality and equality of variance. Levene’s test of equality of variance was found to be insignificant ($F = .042$; $p = .839$). Hence, equality of variance was assumed. The independent sample T-test conducted to compare readability of public and private newspapers (using Fog’s index) found significant difference between public ($\bar{X} = 16.59, \sigma = 1.78$) and private newspapers ($\bar{X} = 16.02, \sigma = 2.19$; $t_{(213)} = 2.09, p = .038$, two-tailed).

Table 3: Independent sample T-test to show difference in readability between public and private newspapers in Ghana

Type of Newspaper	Gunning Fog						
	N	\bar{X}	σ	Mean dif	t	d.f.	Sig
Public	111	16.59	1.78	.57	2.09	213	.038
Private	104	16.01	2.19				

The magnitude of the difference in the mean readability per the Gunning’s Fog index (mean difference = .57) was small (eta squared = .02). In other words, the type of newspaper explains only 2% of the variance in

readability. Hence, although private newspapers (Daily Guide and the Enquirer) are relatively easier to read, the difference with public newspapers (Daily Graphic and Ghanaian Times) was small. From the findings of this objective, the hypothesis which stated that there is no statistically significant difference in the readability of Ghanaian newspapers was rejected.

It is noted that newspapers help readers to make decisions on issues within their communities including the purchase of stuff, which in turn generates funds for newspapers. Hence, it would be expected that private newspapers will especially be made readable in order to generate income for the publishers since such publishers do not obtain financial aid from the government. Yet, the findings of this objective suggest that this opportunity to raise funds is being missed by the publishers of privately owned newspapers.

2.1 Difference in readability between pro – NPP and pro – NDC newspapers

The third objective sought to compare readability of the private newspapers per their perceived political affiliation (Pro NPP and Pro NDC). The results are presented in Table 4.

Table 4: Independent sample T-test to show difference in readability between perceived Pro NPP (Daily Guide) and Pro NDC (enquirer) newspapers

Type of News Paper	Readability Index						
	Gunning Fog						
	N	\bar{X}	σ	Mean dif	T	d.f.	Sig
Pro NPP	50	15.53	1.77	.94	-2.25	102	.027
Pro NDC	54	16.47	2.44				

Levene’s test of equality of variance was found to be significant ($F = 4.374; p = .039$). Hence, equality of variance was not assumed. The independent sample T-test (Table 4) conducted to compare readability of pro – NPP and pro – NDC (using Fog’s index) found significant difference between pro NPP ($\bar{X} = 15.53, \sigma = 1.77$) and pro NDC ($\bar{X} = 16.47, \sigma = 2.44; t_{(102)} = -2.25, p = .027$, two-tailed). The magnitude of the difference in the mean readability per the Gunning’s Fog index (mean difference = .94) between pro NPP and pro NDC newspapers was small (eta squared = .05). This implies that the perceived political party affiliation of the newspaper explains barely 5% of the variance in readability. Hence, although pro NPP newspapers (Daily Guide) is relatively easier to read than perceived pro NDC newspaper (Enquirer), the difference not significant in practical terms.

The findings from this objective were somewhat unexpected because the two political parties are considered to be on different trajectory when it comes to their support base. It is known in Ghana that the NDC profess to be for the general masses including a majority of the less educated or even uneducated citizens. In contrast, the NPP is considered to target the elite. From such premises therefore, it was expected that the pro – NDC newspapers will be more readable since substantial component of their support base are less educated. This

would offer such ones the opportunity to be informed about what is going on in their party and in Ghana in general. This was however not the case since the pro – NPP newspapers (theoretically meant for the elite) was even relatively easier to read than those of the NDC.

3. Conclusions

In summary, Ghanaian newspapers are difficult to read. One must have attained at least 2 years of high school education in order to read (based on Fog's index) and understand. The difficult nature of these newspapers may be due to the editors' preference for long sentences written in complicated language. Private-owned newspapers (Daily Guide and Enquirer) are relatively easier to read than public-owned ones albeit the difference is rather small. Finally, the perceived pro – NPP newspaper (Daily Guide) is relatively easier to read than the perceived pro – NDC newspaper (Enquirer). The difference was however very small.

The above-delineated findings of the present study have at least three major implications.

First, this research has implications for pedagogy in journalistic writing in general and media studies as well as to journalistic practices in Ghana and other similar societies in Africa. Hitherto, some of the benefits have already been implied in earlier deliberations. Firstly, the study adds to knowledge on the direct access and influence of the newspaper publication in Ghana.

As stated earlier, the issue of text readability and comprehension, predominantly the specific perspective proposed in this study, has received little research attention in Ghana. Hence, while reviving scholarly interest and awareness in newspaper readability in the global literature, it contributes another vital perspective to communications research on language use in the print media regarding news production and consumption. Furthermore, this research also serves as one of the first major attempts at investigating the topic in Ghana and it may open up scholarly interest in the field in the country.

Secondly, the study is of importance to teachers and writing instructors in their bid to help other young writers or journalists to write news stories with high readability scores that will sell best. In other words, the acquisition of knowledge on the choice of linguistic variables such as word length or the avoidance of polysyllabic words and the usage of simple grammatical structures are some variables that help the readers to easily understand and comprehend the text intended for mass consumption [17]. This is significant because the target audience will understand the text and a readable text always attracts larger reader-base [12].

In addition, Ghana shares demographics and other social characteristics with other countries in Africa and elsewhere. Thereby, the result of the research could be generalized to other settings which share the same socio-political and press characteristics. The findings from the linguistic analyses and the similarities in the social, economic, cultural and political circumstances between Ghana and other African countries make it possible to apply some aspects of the research findings to such areas. Finally, the study should present an empirical foundation for the Ghanaian press to adopt news production practices that are informed by linguistic considerations regarding the connection between the language of news and its comprehension.

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