READABILITY OF SENIOR HIGH SCHOOL (SHS) ENGLISH AND SOCIAL STUDIES TEXTBOOKS IN GHANA: IMPLICATIONS FOR TEXTBOOK DEVELOPMENT IN GHANA.

Ghana Education Evidence Day 2018
Improving Accountability for Better Learning Outcomes in Ghana: Evidence-informed Approaches to Education Policy and Practice

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Presentation Layout

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Research Questions
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Introduction

- Reading is an important skill for success in the 21st global digital century and the ability to effectively comprehend ideas and information expressed by others in writing depends on good reading skills.

- The level of language used in textbooks plays a major role in the academic success of learners.

- The aim of a textbook, especially an English language textbook for second language learners is to help readers improve their English language competence.

- This aim is defeated when students cannot read (decode and comprehend) texts intended for them.
Materials presented in textbooks should be readable to make our intent transmittable to the intended learners.

However, studies have shown that textbooks and reading materials meant for intended readers are above their level and therefore difficult to read (Pauk, 1974; Kurzman, 1976, Miller, 1977; Keetz, 1978; Humphreys & Humphreys, 2013; Owu-Ewie, 2014; Cardak, Dikmenli & Guven, 2016).

This makes this study crucial because it expands the debate on the Ghanaian SHS learners’ inability to read, which has centered mostly on teacher, parent and student factors without considering the difficulty level of reading materials.
Literature Review

The Concept of Readability

- Dubay (2004), readability is the sum of the total of all those elements which a given piece of printed material has that affect the success of a group of readers

Readability Formulas Used

- The Gunning FOG Readability test (determines how hard a material is to read)
- The Flesch Reading Ease Formula (difficulty level of reading material)
Readability Formulas

- Flesch-Kincaid Grade Level Test (determine grade level of material)
- SMOG Readability Formula (determine age level of material)
- The Coleman-Liau Readability Index (determines grade level)
- Automated Readability Index (ARI) (predicts grade level of material)
Readability Formulas –

They are criticized as

- They are weak indicators of comprehensibility which do not support cognitive processes involved in text comprehension (McNamara & Magliano 2009).

- Do not account for the characteristics of readers or text-related factors like syntactic complexity, coherence rhetorical organization and propositional density (Carrell, 1987).
However,

- They serve as an early warning signs to alert writers that the text being written might be too dense.
- They provide information on the comprehension level of readers as a measure for understanding the content of books as against consideration that bear just on physical outlook and recency of publication among others.
Research Questions

- What are the reading difficulty and age levels of passages in Ghanaian Senior High School English, WASSCE comprehension passages and units from Social Studies textbook?

- What are the implications for improving Senior High School English and Social Studies textbooks writing to make them readable and appropriate to the intended grade level?
Methodology

- This study used a quantitative design approach.
- The data collection strategy used were documents which involved selected passages from English for Senior High Schools (books 2 and 3), Comprehension Plus, WASSCE selected comprehension passages from 2010 to 2016 and units from Social Studies for Senior High School (from year one to three).
- The documents data were analyzed using readability formulas.
- Books and passages were purposefully selected because they have been endorsed by GES.
Methodology (cont’d)

- In all, 96 passages/units were used; 48 from the two English textbooks (16 passages from each level), 24 WASSCE comprehension passages and 24 Social Studies Units (all units selected)

- Readability formulas used - the Gunning FOG Readability test, Flesch Reading Ease Formula, Flesch-Kincaid Grade Level, SMOG Index, Coleman-Liau and Automate Readability Index readability tests to analyze the age and difficulty levels of the texts.

- The data was presented in simple percentages and then represented on a bar chart.
Data Analysis

Research Question 1: What are the reading difficulty and age levels of passages in Ghanaian Senior High School English textbooks, WASSCE comprehension passages and units from Social Studies textbooks?
### Data Analysis

#### Social Studies textbook

<table>
<thead>
<tr>
<th>Age Level of Material</th>
<th>No. of Units</th>
<th>Percentage</th>
<th>Difficulty Level</th>
<th>No of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Age</td>
<td>24</td>
<td>100</td>
<td>Difficult</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>Equal to Age</td>
<td>0</td>
<td>0</td>
<td>Standard</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Below Age</td>
<td>0</td>
<td>0</td>
<td>Below Standard</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
<td>Total</td>
<td>24</td>
<td>100</td>
</tr>
</tbody>
</table>
DATA ANALYSIS

Age Level of Units in SHS Social Studies Textbook

Reading Difficulty Level of Units in SHS Social Studies Textbook
## Data Analysis

### Analysis of WASSCE comprehension passages by Age and Difficulty Levels

<table>
<thead>
<tr>
<th>Age Level of Material</th>
<th>No. of Units</th>
<th>Percentage</th>
<th>Difficulty Level</th>
<th>No. of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Age</td>
<td>3</td>
<td>12.5</td>
<td>Difficult</td>
<td>6</td>
<td>25.0</td>
</tr>
<tr>
<td>Equal to Age</td>
<td>9</td>
<td>37.5</td>
<td>Standard</td>
<td>10</td>
<td>41.7</td>
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<tr>
<td>Below Age</td>
<td>12</td>
<td>50.0</td>
<td>Below Standard</td>
<td>8</td>
<td>33.3</td>
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<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
<td>Total</td>
<td>24</td>
<td>100</td>
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</table>
DATA ANALYSIS

Age Level of WASSCE Comprehension Passages

<table>
<thead>
<tr>
<th>Age Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Age</td>
<td>10</td>
</tr>
<tr>
<td>Equal to Age</td>
<td>40</td>
</tr>
<tr>
<td>Below Age</td>
<td>50</td>
</tr>
</tbody>
</table>

Reading Difficulty Level of WASSCE Comprehension Passages

<table>
<thead>
<tr>
<th>Difficulty Level</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult</td>
<td>25</td>
</tr>
<tr>
<td>Standard</td>
<td>45</td>
</tr>
<tr>
<td>Below Standard</td>
<td>20</td>
</tr>
</tbody>
</table>
**DATA ANALYSIS**

- Combined Analysis of Social Studies/WASSCE/English textbook comprehension passages by Age level and Difficulty Level

<table>
<thead>
<tr>
<th>Age Level of Material</th>
<th>No. of Units</th>
<th>Percentage</th>
<th>Difficulty Level</th>
<th>No of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Age</td>
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<td>Difficult</td>
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</tr>
<tr>
<td>Equal to Age</td>
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<td>23.9</td>
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<td>25.0</td>
</tr>
<tr>
<td>Below Age</td>
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<td>23.9</td>
<td>Below Standard</td>
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<tr>
<td>Total</td>
<td>96</td>
<td>100</td>
<td>Total</td>
<td>96</td>
<td>100</td>
</tr>
</tbody>
</table>
### Data Analysis

#### Age Level of Material

Combined Analysis of Social Studies/WASSCE/English textbook comprehension passages by Age level

<table>
<thead>
<tr>
<th>Age Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Age</td>
<td>60</td>
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<tr>
<td>Equal to Age</td>
<td>20</td>
</tr>
<tr>
<td>Below Age</td>
<td>20</td>
</tr>
</tbody>
</table>

#### Difficulty Level of Materials

Combined Analysis of Social Studies/WASSCE/English textbook comprehension passages by Difficulty Level

<table>
<thead>
<tr>
<th>Difficulty Level</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult</td>
<td>60</td>
</tr>
<tr>
<td>Standard</td>
<td>20</td>
</tr>
<tr>
<td>Below Standard</td>
<td>20</td>
</tr>
</tbody>
</table>
KEY FINDINGS

- Generally, majority of the documents used in the study were above the age of the intended learners and were difficult to read and comprehend.
- There was disparity between comprehension passages in the English textbooks and the WASSCE comprehension passages; the textbook passages were more difficult than the WASSCE passages.
- More passages from the textbooks were above the age level of the intended learners and were thus difficult to read.
KEY FINDINGS

- There was no internal progression in terms of the passages and the units.
- Social Studies textbook units were far above the age of the intended learners; to be used by college students (graduates and post-graduates) and were very difficult to read and understand by SHS students.
- This finding is corroborated by earlier research works of Hoge, 1986) and Robison, Roden, and Szabo (2015).
The study has shown that majority of texts in the Senior High School English and Social Studies textbooks are above the age level of the intended learners and therefore difficult to read and comprehend.

There should be a national framework for the development of textbooks at all levels of the educational system to guide textbook and supplementary book writers.

The Ghana Education Service which approves textbooks should subject all textbooks to readability formula test or other appropriate means before accepting them for use.

There should be a checklist for textbook selection e.g. content, readability, design, emphasis on cognitive level, uniform progression.

There is the need for pretesting of the books on the intended learners before their acceptance and use in schools.

There is the need to expand this study to other textbooks using the same readability formulas or other formulas available.
THANK YOU
Citations

- Include citations for any academic papers, as well as credits for graphics or other content here.