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| RESEARCH ARTICLE

Influence of Textual Schema on Secondary School Students' Organisational and Mechanical Accuracy Skills in Continuous Writing

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| ABSTRACT

Previous studies have indicated that textual and content schemata influence literacy skills. This study was designed to investigate the influence of textual schema on students' organisational and mechanical accuracy skills in writing. The population of participants included all the Senior Secondary School II students in Ibadan. A total number of one hundred and fifty (150) students, selected through a random sampling technique, took part in the study. The descriptive design of the ex post facto type was adopted in the study. A self-structured questionnaire on textual schema and an essay test within the readability level of candidates formed the instruments for data collection. Students' essays were scored based on content, organisation, expression and mechanical accuracy: each aspect was scored based on 100%. Three hypotheses were raised and tested using the Pearson Product Moment Correlation Coefficient. It was discovered that students who had high levels of textual schema reflected adequate organisational and mechanical skills in their essay writing. Based on these findings, it was recommended that students should be exposed to a constant reading of books, ebooks, novels, newspapers, magazines and essays to enhance their textual schema for effective writing.

| KEYWORDS

Textual schema; writing; secondary school students.

| ARTICLE INFORMATION

1. Introduction

Continuous writing is a distinct aspect of the secondary school English language curriculum in Nigeria, and its purpose is to prepare students for creative writing of different kinds within and outside the school setting. Continuous writing usually referred to as composition, is particularly useful since it determines to a large extent, the level of students' expressions in other content areas at the secondary and tertiary levels. Even after formal schooling has been completed, the skill of continuous writing continues to be relevant in the world of work (Matsumura, Correnti& Wang 2015). It is regrettable, though, that even at workplaces, many graduates cannot express themselves adequately in written English. This is a result of poor exposure to the skill of writing at the secondary and tertiary levels of education (Oyinloye et al. 2019). It appears as if teachers do not involve students in adequate pre-reading activities that can inculcate writing abilities in students.

The poor level of writing skills is evident in the West African Educational Council (WAEC) examiners' report of the 2018 West African Senior Secondary School Examination(WASSCE) as captured by Independent Newspaper on February 19, 2020. According to the report, anomalies identified in students' write-ups included poor paragraphing, poor expression, poor punctuation, and wrong use of prepositions and articles. In addition to these errors, it was reported that some students found it difficult to construct simple and correct sentences. Many students, according to WAEC examiners' report, could not write up to the required number of words for their essay topics – this points to the inability of students to generate ideas owing to low level of schemata. Spelling errors and the use of SMS language like "U" for 'you', and "4" for 'for' were also noted. These showed that students were yet to note the

difference between formal and informal writing. With errors of this nature, the tendency is that students would have to grapple with a lot of hindrances in order to produce good quality writing at the tertiary level and even beyond.

According to Areola (2017), there is a need for Nigerians, especially secondary school students, to work on common errors in their spoken and written forms of English expression. This is a reasonable assertion since there is a form of interwoven relationship among the four language skills - listening, speaking, reading and writing. It appears obvious that showing abilities in one language skill affect competence in another language skill. For instance, scholars have pointed out the fact that good readers tend to become good writers. (Smith 1988). Allen (1987) noted that reading and writing are linked because of the convention of grammar, spelling and punctuation, which the two skills share. Both skills have to do with meaning because readers obtain meaning while writers produce meaning. In the process of building meaning, both literacy and language skills utilize schemata (bunches of knowledge). The level of sophistication or attainment of competence in reading and writing depends on the richness of a reader's or a writer's schemata. Allen (1987), quoting Tierney and Pearson, stated thus concerning the link between schemata and writing:

"... as a writer writes, she uses her own background of experience to generate ideas and, in order to produce a text which is considerate to her idealized reader, filters these drafts through her judgments about what her readers background..."

It could then be clearly understood that both writers and readers consistently infuse their internalized schemata into the processes of writing and reading, respectively, depending on the topics being considered. If a student does not possess adequate information about a given topic, hardly can such a student present a logical and comprehensive write-up on such a topic. The nature of schemata that facilitates efficient writing includes formal and content schemata. Formal schema refers to a student's knowledge of the textual structure and various forms of genres with their detailed features. On the other hand, content schema refers to various items of knowledge associated with different topics of discourse derivable from texts, daily experiences, movies, and information from resource persons. Content schema is needed to ensure the proper generation of ideas. According to Allen (1987), formal schema reflects items like "knowledge of discourse-level convention", which include story structures, personal letter forms, patterns of article writing and scientific reports; he added that content schema includes readers' or writers' general knowledge about culture, language and various aspects of life. The main thrust of this paper is that the textual schema internalized by students would likely influence their mechanical accuracy and organizational skills in continuous writing. Many authors have examined the effects of various methodologies on writing, but not many research works have been carried out to determine the influence of formal or textual schema on the subskills of continuous writing of secondary school students in Ibadan.

2. Review of Literature
2.1 Sub-skills of writing
Writing is a deep cognitive activity that is expressed through the psychomotor skill of penning ideas or utilising the computer to creatively express one's thoughts, opinions, and fictitious or non-fictitious ideas on a given topic. It is a literacy or language skill that is characterised by the presence of content, audience and purpose (CAP) – these elements determine the nature of a given write-up. According to Odiaka (2010), writing is a literacy or language skill that involves a systematic organisation of the syntactic, lexical and pragmatic elements of a language in order to expatiate on a given theme for the benefit of a given audience. This definition expresses the fact that writing involves syntactic, lexical, organizational and pragmatic skills. All these skills, in turn, align with formal and content schemata. Writing, therefore, as a productive skill involves the development of a designed idea (content), organisational skills, expression and mechanical accuracy - these form the criteria for evaluating any given write-up at the secondary school level. These criteria were also utilised in the process of grading the quantitative data collected for this study.

According to Wiredu and Oyeleye (1998), the various skills in continuous writing include the following:

- Language use: The ability to use correct and appropriate sentences (this has to do with various sentence types)
- Mechanical skill: The ability to use those conventions peculiar to the written language, such as punctuation and spelling correctly.
- Content:- The ability to think creatively and develop thought, excluding irrelevant information.
- Stylistic skill:- Ability to manipulate sentences and paragraphs and use language effectively.
- Judgement skills:- Ability to write in an appropriate manner for a particular audience.

These skills, however, are not acquired or developed instantaneously. Would-be writers who want to be effective in the skill of writing read extensively and practise the skill intensively until it is imbibed by them. Through the regular reading of different texts, they are exposed to text structures which involve different thought patterns. These are, in turn, reflected in their future write-ups. Such thought patterns are classification, problem-solution, comparison-contrast, cause-effect, and enumeration or sequence thought patterns. These thought patterns are also organizational skills that enable one to build meaningful paragraphs.

Apart from organisational skills, writing skills include punctuations and spelling, which make up mechanical skills. According to Dawson (2006), good essays have correct spelling, punctuation, and properly arranged sentences. Nordquist (2020) posited that mechanics are conventions governing the technical aspects of writing, including spelling, punctuation, capitalisation and abbreviation. Spelling involves selecting the right letters from the orthography of a given language and arranging them properly to obtain the accepted conventional representation of a given word to portray its accepted meaning. Any anomaly in spelling tends to mar the outlook and the intended meaning of a given write-up. Punctuation entails the use of signs like the comma (,), fullstop (.), colon (:), semi-colon (;) and question mark (?). Punctuation also includes the use of capitalisation in its proper places within a given write-up. For instance, proper nouns like unique names of persons, places and things should commence with capital letters. All mechanical skills are as important as the skill of organisation and generation of ideas because they enhance the meaning of the ideas generated. This paper examined the influence of textual schema on the mechanical skills of some secondary school students' composition in Ibadan. Having examined the sub-skills of writing, it is important to look at the writing problems of secondary school students in Nigeria.

2.2 Writing Problems of Secondary School Students in Nigeria

Despite the fact that the English language is a compulsory subject for adolescents in Nigerian secondary schools, it is still handled with levity by students, as reflected in various WASSCE results. This levity translates to poor writing skills at the tertiary level. Research carried out by Oyinloye et al. (2019) showed that sampled students at the tertiary level, even after secondary education, committed the following errors in their essays: spelling error (258 times); misused past tense (254 times) past participle (248 times) and errors in plural formation (280 times). Although the candidates co-opted for this study were 100 level students at a tertiary institution, their poor performance was a reflection of their attitude to the study of the English language as well as the nature of the methodology used.

Okotie (2010), quoting Alihu (1997), identified the following as the factors hindering effective writing among secondary school students:

- Mixed items (example involves mixing present and past tense in narratives
- Poor topic identification
- Awkward sentence construction
- Poor spelling
- Inappropriate words and expressions
- Lack of adequate ideas to write on

Okotie listed the causes of these problems as poor linguistic background, unfamiliarity with essay topics and bad reading culture, among others. Perhaps if reading culture was enhanced, students would internalize textual schema that could salvage their writing abilities. Quite often, too, even the writing exercises are not properly done by writing teachers; usually, the English language teachers do not take the students through the pre-writing, writing and post-writing stages religiously. A type of "one-shot" approach is adopted whereby the English teacher simply gives the students the essay topic to write on and then spends a huge time lag before giving students feedback. The effect that these poor practices have on the students is that errors are not clearly identified, and corrections are effected in subsequent writings. The students' writing abilities levels, therefore, tend to remain stagnant. This is the reason why students cannot engage in meaningful write-ups that can aim at solving intellectual problems (Matsumura, Correnti and Wang 2015).

To ensure good quality writing among students, it is expected that teachers should adopt the process approach to writing (Duruamaku – Dim 2006). This approach includes the pre-writing stage, the composition or the writing stage and the revision stage. The pre-writing stage is the stage of obtaining information and discussing the topic; the composition stage includes the construction of the introduction, the body and the conclusion of the write-up; the revision stage has to do with revisiting the write-up in order to correct errors. Apart from these, students are expected to expose their writings to many audiences – their teachers, class-mates, online assessor including even unknown audiences. Receiving feedback from the such audience and effecting the correction pointed out will enhance the quality of students' writing (Lammers and Marsh 2015).

2.3 Theoretical Basis

This research work is anchored on two important theories. The first theory is the Schema Theory. According to Allen (1987), schema theory offers a cognitive basis for integrating reading and writing instruction. It becomes a basis for exposing different text structures and genres to writers with a view to enabling them to incorporate the styles and intricacies of such genres into their writing. Schemata refer to bunches of knowledge that an individual has internalized through day-to-day experiences, including the reading of various texts. Knowledge is constantly being organized as a learner interacts with objects in the environment. In the

construction of meaning through writing, these schemata are brought to bear on the written items. Both background and formal schemata aid quality writing.

The second theory is the cognitive process theory of writing, propounded by Flower and Hayes (1981). This theory stresses or explains the process of writing as a cognitive activity that includes three sub-processes of planning, translating or drafting and revising. While the planning stage involves the generation of ideas (a very important writing skill) and the organization of these ideas, the drafting stage has to do with converting ideas to words. This implies that vocabulary skills constitute an important aspect of writing. The revision process is the last stage, and it is the process of critically examining the write-up to create deeper meaning and improve the content as well as the structure of the composition.

2.4 Empirical Review
Different scholarly research works have been done to determine the influence of textual schema on various writing skills. Using the mixed-method design, Strong (2020) investigated a text structure intervention for reading and writing in Grades 4 and 5. A total of 351 students participated in the study. 160 students received the text structure intervention, and 191 students were exposed to the comprehension strategy intervention. Results showed that students who were exposed to text structure intervention performed better than students in the comprehension strategies intervention in terms of text structure awareness, graphic organizer task, and the use of ideas and details in informational writing. Also, Flower and Hayes (1981) found that skilled writers made use of text structure knowledge to organize ideas and details in their writings.

In another study, Maftoon and Babamiri (2012) investigated the impact of building formal schemata on the improvement of Iranian EFL learners' writing performance. Using two intact classes in pretest-posttest quasi-experimental research, the researchers found that building formal schemata significantly affected students' writing. While most research works involving schemata merely looked at the effect of schemata on reading or writing, none of these research works examined the effect of schema on the subskills of writing, like content organization and mechanical accuracy skills.

2.5 Statement of the problem
As important as the ability to write well is to students' academic life generally, research has shown that students' proficiency in the English language is poor (Okotie 2010; Oyinloye et al. 2019). WAEC chief examiner's report on essay writing for the year 2018 showed that students' writing performance was very low.

Despite the fact that annual reports are given by WAEC to correct the anomalies noticeable in students' performance, students have not made much improvement over the years. The problems of poor grammatical expression, poor punctuation and faulty spelling persist. These have created diffidence in the minds of school leavers and many graduates when it comes to using the English language in written forms. This paper, therefore, examines the influence of textual schema on the organisational and mechanical skills of secondary school students' essay writing in Ibadan.

2.6 Objectives of the Study
The general objective of the study is to examine the influence of textual schema on the continuous writing of senior secondary school students in the Ibadan metropolis. The specific objectives are to:

- Examine the relationship between textual schema and secondary school students' organisational skills in essay writing.
- Investigate the relationship between students' textual schema and their mechanical accuracy skills in continuous writing

2.7 Hypotheses
Ho_1: There is no significant relationship between textual schema and secondary school students' continuous writing
Ho_2: There is no significant relationship between students' textual schema and organizational skills in continuous writing
Ho_3: There is no significant relationship between students' textual schema and mechanical accuracy skill

3. Methodology
3.1 Research Design
The descriptive survey design of the ex post facto type was adopted for this research. This research design was chosen because of its suitability and effectiveness in examining the influence of textual schema on students' subskills of writing (mechanical accuracy and organizational skills). These skills were already existent in the writing abilities of the students, so the design did not require the manipulation of variables to obtain systematic results.

3.2 Population and Sampling
The population of the study comprised Senior Secondary School II students of public secondary schools in the Ibadan metropolis. 150 students, including male and female students, were randomly selected from three co-educational schools in Ibadan. The instruments used for data collection were a self-structured questionnaire- Questionnaire on Textual Schema (r= 0.75) and an essay test titled: "A story ending with the statement "all that glitters is not gold". The essays were graded using WAEC guidelines for scoring expressions, contents, organisation and mechanical accuracy, with the score of each skill based on 100 percent. Pearson Product Moment Correlation Coefficient was used to test the three hypotheses stated.

3.3 Procedure for Data Collection
Before proceeding to the field for data collection, the researchers collected an endorsed letter from the Head of the Department of Adult Education, University of Ibadan, authorising the researchers to carry out the study. With this letter, the appropriate introduction was done in the various schools, and the researchers were granted access to the classes. The questionnaire on textual schema was administered to the students before they were given the test on essay writing.

4. Data Presentation, Analysis and Results

Table 1:Analysis of Demographic Variable (Sex)

Male	78
Female	72
Total	150

From Table 1, it is shown that a total of 150 students participated in the study. 78 were male students, while 72 were female students.

Hypothesis 1: There is no significant relationship between textual schema and secondary school students'' continuous writing.

Table 2: Pearson Product Moment Correlation (PPMC) showing the Relationship between Textual Schema and Secondary School Students' Continuous Writing.

Variables	Mean	Std. Deviation	N	Df	R	Sig	P. value
Textual Schema	16.9400	1.82444					
Continuous writing	4.9200	1.96793	150	148	.246	.002	<.05

Table 2 shows that there is a significant relationship between textual schema and secondary school students' continuous writing; r(148) = .246, P<0.05; hence the null hypothesis was not accepted. The coefficient of determination r^2 = 0.061 implies that textual schema accounted for 6.1% variation in continuous writing.

This finding corroborates the findings of Strong (2020). Strong found out that students who were exposed to text structure intervention did better in essay writing in terms of the use of ideas and details in information writing than their counterparts in the comprehension strategy intervention.

Hypothesis 2: There is no significant relationship between students' textual schema and organizational skills.

Table 3: Pearson Product Moment Correlation (PPMC) showing the Relationship between Students' Textual Schema and Organisational Skill.

Variables	Mean	Std. Deviation	N	Df	R	Sig	P. value
Textual Schema	16.9400	1.82444					
Organizational skill	4.7600	1.65347	150	148	.288	.000	<.05

Table 3 shows that there is a significant relationship between textual schema and secondary school students' organisational skills; r(148) = .288, p < 0.05. The null hypothesis, which stated that there is no significant relationship between students' textual schema

and organisational skills, was therefore rejected. The coefficient of determination r^2 = 0.083 implies that textual schema accounted for 8.3% variation in organisational skill.

This finding is in line with the finding of Maftoon and Babamiri (2012), whose results revealed that when students were given training on rhetorical organization, it built their formal schema and had a statistically significant effect on the improvement of their writing performance. Also, this finding corroborates the result obtained by Flowers and Hayes when they confirmed that text structure knowledge enabled skilled writers to organize their writings and details adequately.

Hypothesis 3: There is no significant relationship between students' textual schema and mechanical accuracy skills.

Table 4: Pearson Product Moment Correlation (PPMC) showing the Relationship between Students' Textual Schema and Mechanical Accuracy Skills.

Variables	Mean	Std. Deviation	N	Df	R	Sig	P. value
Textual Schema	16.9400	1.82444					
Mechanical accuracy skill	1.8800	2.30529	150	148	.269	.001	<.05

Table 4 shows that there is a significant relationship between textual schema and secondary school students' school students' mechanical accuracy skill; r(148) = .269, p < 0.05. The null hypothesis was therefore rejected. The coefficient of determination (r^2 = 0.072) shows that textual schema accounted for a 7.2% variation in mechanical accuracy skill. Even though this relationship is low, the finding confirms the assertion of Dawson (2006) that mechanical accuracy skill is part of what gives rise to good writing, as reflected in the essays of the participants co-opted in the study.

5. Conclusion

Writing is a technical skill that is evaluated from different aspects. No doubt, there could be an element of subjectivity in assessing write-ups since assessors utilise different criteria. A major limitation experienced in the course of data collection was the reluctance shown by some lazy students who did not see the need to participate in the study. Coupled with this was the absence of funds which made it impossible for the researchers to incorporate a larger sample size for the study. Future studies on schemata and writing could be done using the quasi-experimental design as well as more sophisticated methods of assessing write-ups. In this study, the current criteria utilised by the West African Examination Council (WAEC) were used to investigate the relationship between students' formal schema and their writing skills. Findings revealed that formal schema significantly affects students' general writing skills, including the generation of ideas, organization of ideas and mechanical accuracy.

5.1 Recommendations

Based on the findings of this research, the study recommends as follows:

- Students should be encouraged to constantly engage in extensive reading of books, newspapers, magazines, essays and novels. This will help to improve their formal schema and, in turn, affect their writing skills positively.
- students should be exposed to rich libraries of books, including ICT materials like video tapes, audio tapes, and ebooks that can boost their content and formal schemata
- proper monitoring and evaluation of students reading and writing skills should be done by English teachers to ensure adequate development of reading and writing skills since they have a significant link.

Conflict of Interest: The authors declare no conflict of interest.
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