



The Effect of Facebook Writing Group on Ethiopian Secondary School Students' Writing Performance and Quality of Paragraphs

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Abstract

Teaching with widely accessed social media network tools like Facebook can positively contribute to students' writing performance and quality of writing. However, teachers usually disregard Facebook because they doubt if it can be used as a platform for education. Therefore, this nested experimental design study investigated the effect of a Facebook writing group on students' paragraph writing performance and the quality of paragraph writing. In order to achieve these, the researchers used randomly selected grade 11 students who were then randomly divided into two groups: experimental group and control group. The experimental group was taught paragraph writing in their Facebook writing group, whereas the control group was taught paragraph writing in a face-to-face (conventional classroom) situation. The researchers used pre-test and post-test to understand the effects of Facebook on students writing performance. An Independent sample T-test of the pre-test was used to check the equivalence between the experimental and control groups at the pre-intervention stage. Since the inferential statistical values for the pre-test mean of the control and the experimental groups were ($t(.430)$, $df=22$, $p=.671$) at 0.05 level of significance, the groups were considered similar. The researchers used the same statistical test on the post-test to examine the impact of the treatment (the intervention). The study finding revealed that there was a statistically significant difference between the scores of the groups in favor of the experimental group as the inferential statistical values for the post-test mean difference between the groups were ($t(3.442)$, $df=22$, $p=.002$) at 0.05 level of significance. The researchers attributed this considerable result to the effectiveness of using Facebook for paragraph writing. However, the qualitative analysis of 14 paragraphs of the Facebook writing group showed that the quality of the paragraphs was not to the standard. As a result, teachers should equally consider the quality of students' writing in addition to the improvement in their performances when using Facebook writing groups for teaching writing. Coursebook writers should also include writing tasks involving technological tools like Facebook at least as extension activities to the classroom writing with adequate exercises on punctuation, spelling, grammar, capitalization, and organization.

Keywords: Facebook, group, paragraph writing, quality of paragraph, writing performance

1. Introduction

The presence of technology in and around the classrooms is affecting teachers and students either positively or negatively. It is becoming certain that it forces teachers to modify their ways of teaching. This is especially true for language teaching as the face-to-face communications we used to do are now modified and gone beyond borders with the introduction of emails and social media. If teachers ignore to include technology in their lessons, students will soon see them as old-fashioned and backward. Yet, students continue to use the technologies. Chapelle (2008) believes that since students started accessing technology outside the classroom, this will make them expect technology use in the classroom. Littlejohn and Pegler (2007, p. 22) assert that "... there is a sense in which the learner cannot be separated from technology and will use it with or without explicit instruction from the tutor." This is the case with Facebook among Ethiopian teenagers, i.e., secondary school students. A review of studies on Facebook by Aydin (2012) asserts that Facebook users are predominantly students.

Teachers who create Facebook groups for the lessons they teach would be seen as innovative and forward-looking because as Fox (2011, p. 2) writes, "Today more than at any other time, the potential for technology to provide a major catalyst for change in what we do and how we do it in education has never been more apparent." Wang, Woo, Quek, Yang, and Liu (2012, p.428) write that "It [Facebook], like many other new technologies, has potential power for teaching and learning because of its unique built-in functions that offer pedagogical, social and technological affordances."

With the current progressively increasing access to technology in the country, English Language teachers in Ethiopia need to see options like Facebook for extending classroom learning. Warschauer (2000) and Chapelle (2003 and 2008) affirm the importance of technology in language teaching and learning as it has already started to affect it. Hockly (2012, p. 110) particularly states that "It is increasingly difficult for us to separate language from the digital environment in which it is being used."

After reviewing the vast literature on Facebook between 2012 and 2015 as a technology-enhanced learning environment, Manca and Ranieri (2016) indicate that Facebook is an informal, dynamic, social and flexible environment where structured learning experiences can take place. However,

Aydin (2012) writes that Facebook participation is criticized for leading to inappropriate behaviors, abuse, cyberbullying, and problems related to privacy and friendship.

With the new political change in Ethiopia, Facebook is used to create social unrest by spreading hate speeches and rumors. In such a situation, starting to think if Facebook can rather be used as a platform of education would be important. In addition, if we have to connect their experience of using Facebook for language learning, writing would be a good choice since communications in this media are done through writing. If all schools provide Facebook writing tasks, learners can start to focus on responding to teachers' demands, and they may stop fooling on Facebook. Yet, this has to come from data-driven working cases, and it has to be done through a closed group of classmates to reduce the uncertainty to write for a global audience. Moreover, Facebook Writing groups, in particular, can be counterproductive as students write with lesser anxiety than face-to-face writing due to the absence of teachers' strict physical follow-up.

On the contrary, there are already a bulk of studies on Facebook in education. For instance, Mazman and Usluel (2010), Pimmer, Linxen, and Gröhlbiel (2012), Buga, et al. (2014), Wang and Vásquez (2014), Bowman, and Akcaoglu (2014), Magogwe, Ntereke and Phetlhe (2014), Milošević, et al. (2015), Lambic (2016) and Sirivedin, et al. (2018). Nonetheless, we have observed that studies combining the effects of Facebook Writing Group on paragraph writing performance and quality of written paragraphs in secondary schools are negligible, especially in Ethiopia. Magogwe, Ntereke, and Phetlhe (2014) note that research on using Facebook in education in Sub-Saharan Africa, which includes Ethiopia, is scanty. Thus, the researchers have decided to explore the effects of a Facebook writing group on students' writing performance and the quality of paragraphs. The objectives of the study were specifically to:

1. explore if experimental students' paragraph writing performance significantly improves after their involvement in the Facebook Writing Group compared to the control group.
2. examine the quality of the students' paragraphs in the Facebook Writing Group.

1.1. Hypothesis

The hypotheses (H) of this study are:

H₁: Experimental students' paragraph writing performance significantly improves after their involvement in the Facebook Writing Group compared to the control group

H₀: Experimental students' paragraph writing performance does not significantly improve after their involvement in the Facebook Writing Group compared to the control group

2. Methodology

2.1. Design of the Study

A nested experimental design was used to examine the effect of the Facebook writing group on Ethiopian secondary school students' paragraph writing skills. This research design had both pre and post-tests and experimental and control groups with random assignment of subjects into the experimental and control group. Complementing this design, a descriptive analysis of the paragraphs written by the experimental group was also made.

2.2. The Samples and The Sampling Techniques

Chamo Secondary School eleventh-grade students who were taking the English Language as a subject in 2016/17 were taken for the study. A total of 40 students ($n=40$) were randomly selected from a list of 220 ($N=220$) students using a simple random sampling technique. The 40 students were further randomly grouped into experimental and control groups using systematic random sampling techniques where ($n=20$) were experimental and ($n=20$) were control groups. Since eight participants dropped out from each group, the analysis was made based on the remaining twelve students for each group. Moreover, of 28 paragraphs written by the Facebook Writing Group students, 14 of them were randomly selected for the descriptive analysis.

2.3. The Data Collection Instruments

The instruments of data collection used in the study were pre-test and post-test and document analysis. The tests were paragraph writing tests where students were asked to write descriptive paragraphs on topics provided by the researchers at the pre and post interventions stage. Even if the topics of the pre and post-intervention writing tests were different, the instructions and the types of paragraphs they were required to write on were similar. Moreover, the marking rubrics for both cases

were identical. On the other hand, the documents for the study were the 28 paragraphs produced by the experimental group on tasks that included describing the Ethiopian flag, writing about coffee making in Ethiopia, and writing about oneself.

Scoring

The students' writings were scored on the bases of spelling, punctuation, organization, and grammar through a pre-prepared rubric. The total score of each test was 20 points, and the weightage for each item in the rubrics was 5 marks. The rubrics defined the marking from five points to zero, with five referring to perfect spelling, punctuation, organization, and grammar and zero referring to hardly any correct spelling, punctuation, and grammar and a disorganized paragraph. See the table below for the rubrics.

Table 1: Rubrics for marking the pre-test and post-test written paragraphs

N	Criteria of Marking	5	4	3	2	1	0
1	Spelling	No spelling error	Very few spelling errors	A moderate number of spelling errors	A large number of spelling errors	A very large number of spelling errors	Hardly Any correct spelling
2	Punctuation	No punctuation error	Very few punctuation errors	A moderate number of punctuation errors	A large number of punctuation errors	A very large number of punctuation errors	Hardly any correct punctuation
3	Organization	All sentences are very well connected to each other	Very few problems in the organization	Moderate organization problem	A big problem of organization	A very big problem for the organization	Disorganized writing
4	Grammar/Language	No grammar errors in the paragraph	Very few grammar errors	A moderate number of grammar errors	A large number of grammar errors	A very large number of grammar errors	Hardly any correct grammar

Validity and Reliability of the Tools

To ensure the quality of data collecting tools, piloting was made with a group of grade eleven students at a different school. The test was administered twice on two different occasions. The second was administered after a week after the first administration and the scoring was made by a teacher-oriented for the purpose based on the rubric prepared. The piloting Pearson Correlation Coefficient of the test result revealed a significant and strong relationship ($r(11) = .81, p = .001$). To check the validity of the tests, they were shown to a university instructor from Educational Psychology who majored in Educational Measurement. The expert saw the test as valid concerning the objectives of the study.

Materials and Procedures of the Study

This study used the following experimental and course organization procedures.

1. **Training:** The experimental groups and their teacher were helped to take induction training for an hour. The contents of the training included how to join a Facebook writing group, how to write using cell phones, and how to provide feedback on Facebook writing.
2. **Applying Tools:** The pre-tests were given to the students in the control and experimental group on the first week of their lessons; in fact, this was done before the induction training. This was to understand the writing skills of the experimental and control groups at the start for later comparison. The post-test was administered to the two groups upon the completion of all the writing lessons.
3. **The Treatment:** Different descriptive paragraph writing exercises for both the experimental and the control groups were the materials used in the study. The experimental group was accessing the instructions, and they had to do the exercises in the closed Facebook Writing Group formed by the researchers. Feedback on their writing was given through the Facebook-trained teacher, and peer feedback was also occasionally provided. The access devices which both the teacher and the students used were mobile phones. The control group, on the other hand, was called for writing classes in a pre-arranged schedule, and they were provided with the writing tasks in the usual face-to-face manner. Feedback on their writing was given on papers they produced by the teacher, and peer feedback was also occasionally provided. The lessons lasted for Four months from February 2018 to May 2018.

2.4. Data processing and analysis

The test results were analyzed using SPSS version 20 to compare the outcome of the intervention both between groups and within groups. The statistical tools used for the quantitative aspect of this study were the independent t-test and paired samples t-test while the paragraphs were qualitatively analyzed for sentence elements of a paragraph, organization, spelling, punctuation, capitalization, and grammar.

Independent Samples T-test

An independent sample t-test for the significance of the mean difference in the writing test result was used to examine whether the mean differences between the experimental and control groups were statistically significant or not. Statistically, the rejection or acceptance of a null hypothesis is always made based on some level of significance (alpha level) as a criterion. In social science research like this one, the 5 percent (0.05) alpha (α) level of significance is often used as a standard (Cohen and Lea, 2004). Therefore, a (0.05) alpha level of significance was used throughout this study.

Paired samples T-test

The paired samples t-test was used to determine the significance of mean gains in the writing test result within the experimental group, comparing the pre-and post-intervention results. The paired t-test was preferred, as measurements were taken from the same subject before and after some intervention. In addition, pairing increases the chance that any differences are due to the treatment effect. This is because the paired t-test avoids some of the experimental errors as it picks up a significant difference.

Both independent and paired samples t-tests were used throughout, provided that the assumptions of t-tests have been met. These assumptions are that (1) the scores in each group should normally be distributed and (2) the variances for the scores of the two groups should be equal (homogenous). The normal distribution of the test was checked through physical observation of histograms of the scores, and they were found to be approximately normal. The second assumption was checked using Levene's Test for Equality of Variances. Since the Significance (Sig.) value for Levene's test was greater than 0.05, the first line in the table (Equal variance assumed) was used.

3. Results and Discussion

This study aimed at exploring the effect of a Facebook writing group on the writing performance of students and on the quality of the paragraphs they produce. This section presents the results and discussions of the study.

3.1. Results of the study

3.1.1. Pre-intervention Status of the Groups

Before the intervention, an independent t-test was run to see if the two groups were equal in their pre-test. The result is indicated in Table 2 below.

Table 2: Pre-intervention status of students on the writing performance test

Group	N	Mean	SD	Df	t	P
Experimental	12	14.1667	2.44330	22	.430	.671
Control	12	13.7500	2.30119			

Table 2 above is a 2- tailed independent samples t-test for the equality of means comparing the experimental and the control groups in their paragraph writing pre-test mean scores. The pre-test mean scores of the experimental and control groups were 14.16 and 13.75 while standard deviations were computed to be 2.44 and 2.30, respectively. As depicted in the Table, the inferential statistical values for the pre-test mean the difference between the control and the experimental groups were (t (.430), df=22, p=.671) at 0.05 level of significance. Since $P > .05$, there is no significant difference between the means of the two groups. Therefore, the experimental and control groups were similar in their paragraph writing scores before the experimental treatment.

3.2. The effect of a Facebook writing group on students' writing performance

3.2.1. The difference between the experimental and control groups

To identify if there is a significant mean difference in the paragraph test result between experimental and control groups at the post-intervention stage, an independent t-test was run. Table 3 shows this computed output.

Table 3: The post-test Result of both the experimental and the control group

Group	N	Mean	SD	T	Df	P
Experimental	12	16.7500	1.95982	3.442	22	0.002
Control	12	14.0000	1.95402			

Table 3 is a 2- tailed independent samples t-test for the difference of means comparing the experimental and the control groups in their paragraph writing post-test mean scores. The post-test mean scores of the experimental and control groups were 16.75 and 14, while standard deviations were computed to be 1.95982 and 1.95402, respectively. As shown in the Table, the inferential statistical values for the post-test mean difference between the experimental and the control groups were (t (3.442), df=22, p=.002) at 0.05 level of significance. Since $P < .05$, there is a significant difference between the means of the two groups. These numbers showed that there was a statistically significant difference at ($\alpha \leq 0.05$) between both post-tests of the experimental group and the control group according to their value. This showed that using Facebook in improving the students' writing performance had a positive effect on the achievement of the students in the experimental group more than the students in the control group. The positive performance could probably result from the students' freedom to practice writing in their own time, pace, and space, which in turn reduced writing anxiety.

The positive changes in the use of Facebook in writing are supported by other research findings and scholars. Aydin (2012) asserts Facebook improves foreign and second language learning skills in reading and writing. Williams and Beam (2018), based on a review of research on technology and writing, conclude that technology-mediated writing instruction results in improvements in students' writing skills. A study by Sirivedin, Soopunyo, Srisuantang, and Wongsothorn (2018) also indicates

that Facebook helped the study participants significantly improve their writing skills, namely accuracy, meaningfulness, clarity, and relevance.

3.3 The Analysis of Facebook Writing Paragraphs

Different tasks of writing were given to both groups. The tasks included describing the Ethiopian flag, writing about coffee making in Ethiopia, and writing about oneself. These were analyzed for sentence elements of a paragraph, organization, spelling, punctuation, capitalization, and grammar.

3.4. Paragraphs Describing the Ethiopian Flag

Screenshots of two paragraphs were selected for qualitative analysis of the Facebook writing group on Describing Ethiopian Flag. These are presented below.

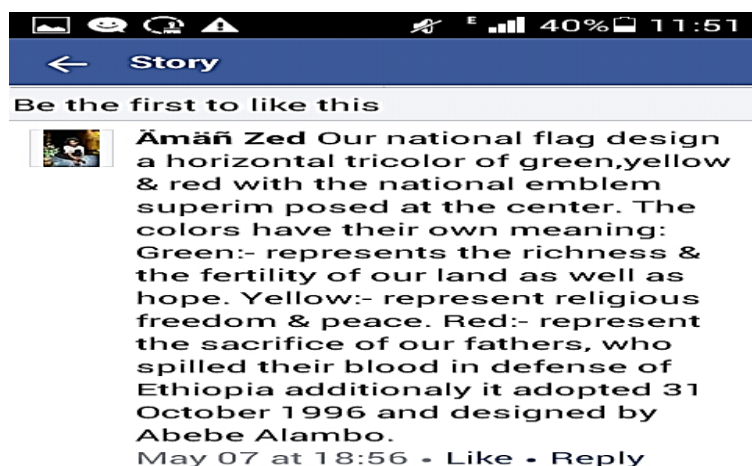


Figure 1: The first paragraph on describing Ethiopian flag

Figure one is a screenshot of Aman Zed's paragraph written in the Facebook writing group. The topic sentence comes at the beginning of the paragraph, describing the color and design of the Ethiopian flag. Even if it lacks a verb, the topic sentence played its purpose of introducing the paragraph. The three sentences following the topic sentence describe the meanings of the three colors following what is introduced in the topic sentence. However, the fourth sentence neither relates to the details nor is a concluding sentence. In fact, the paragraph has no concluding sentence. A new sentence should have started at 'additionally'. This sentence reads odd and difficult to understand. *'Additionally it adopted 31 October 1996 and designed by Abebe Alambo.'*



Figure 1: The second paragraph describing the Ethiopian flag

Figure 2 is a screenshot of another paragraph written in the Facebook writing group. The paragraph has no topic sentence. It directly goes to the details with explanations provided in braces. The use of the word ‘near’ in the third sentence is rather confusing, and using braces made the reader difficult to follow the central idea of the paragraph. The paragraph also has no concluding sentence.

In general, Paragraph 1 reads better than Paragraph 2. However, the number of paragraphs which were sampled for analysis was only two, which may not show the whole picture.

3.5 Paragraphs on Traditional Coffee making Process in Ethiopia

A total of five paragraphs on the Traditional Coffee making Process in Ethiopia were selected for analysis. The paragraphs were of varying length and organization. The brief descriptive analysis of each is presented below along with the screenshots.



Figure 2: The first paragraph describing the Ethiopian traditional coffee-making process

Figure three is a screenshot of a paragraph by Semahegn Adugna. The paragraph starts with the first step of the traditional coffee-making process and continues to describe this in detail in six sentences, even if the end of the second and the beginning of the third sentence is not known due to the absence of a period at the end. The concluding sentence is simply a restatement of the last sentence. The paragraph has no topic sentence.



Figure 4: The second paragraph describing the Ethiopian traditional coffee-making process

Alike the earlier paragraph, the paragraph by Montesnot starts with the first step of the Ethiopian traditional coffee-making process. The paragraph contains six sentences, but none of the sentences is capitalized except the first. The concluding sentence declares that the ceremony is ready. Similar to

the earlier paragraph, this has no topic sentence. The word ‘then’ is repeatedly used to show the steps.

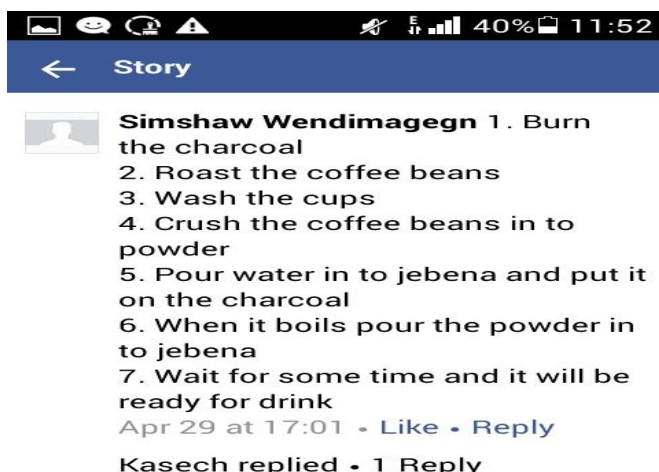


Figure 3: The third paragraph describing the Ethiopian traditional coffee-making process

This paragraph is written in instructions form instead of a paragraph describing the process of making Ethiopian traditional coffee. This might be because the writer misunderstood the instruction, or the researchers did not make the instructions clear. However, the writer clearly describes the steps of making traditional coffee.



Figure 4: The fourth paragraph describing the Ethiopian traditional coffee making process

This is a paragraph of five sentences with all the sentences punctuated well except the fourth one. Four of the sentences are supporting details, and the last one is a concluding sentence. However, the paragraph has no topic sentence. The preposition *'for'* is missing in the fourth sentence after the word *'wait.'*



Figure 5: The fifth paragraph describing the Ethiopian traditional coffee-making process

Unlike the previous four paragraphs, this one has a topic sentence. The topic sentence is followed by six sentences of supporting details, with no capitalization at the start of each sentence. Even if the concluding sentence is not well-connected to the details, it appears at the end. We can say this is a paragraph with all elements of a paragraph included compared to the previous four.

To sum up, the paragraphs describing the Ethiopian traditional coffee-making process are of varying organization and punctuation problems, but all varying degrees very well describe the process.

The paragraphs on writing about oneself

A total of seven paragraphs on writing about oneself were selected for analysis. The brief descriptive analysis of each is presented below, along with the screenshots.



Figure 6: The first paragraph on writing about oneself

This paragraph of Fuad contains twelve sentences, and none of the beginning sentences are capitalized. The phrase ‘my born place’ in the second and ‘know’ in the eighth sentence are wrongly used. They are to mean my birthplace and now, respectively. The sentence ‘I’m interest in enjoying my life.’ is a strange sentence. This probably is to mean that ‘I want to enjoy my life.’ Difficult to find a topic and concluding sentence in this paragraph.



Figure 9: The second paragraph on writing about oneself

Difficult to know where a new sentence starts in this paragraph, as sentences are not punctuated well. Very odd to see the word brother spelled as ‘berazer’ in the third line. Similar to the first paragraph, it is difficult to find the topic and concluding paragraph.

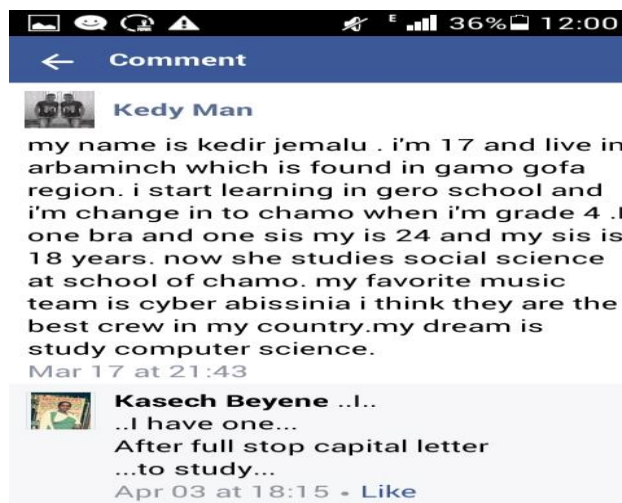


Figure 10: The third paragraph on writing about oneself

Alike in the earlier paragraphs, capitalization at the beginning of sentences is a problem here. The paragraph has several grammatical problems. One bad example is ‘i’m change in to chamo when i’m grade 4’. Missing words are making the meanings of the paragraph obscure. ‘I one bra...my is 24...’ are some examples. Alike the previous paragraphs, this one also does not have both a topic sentence and a concluding sentence.

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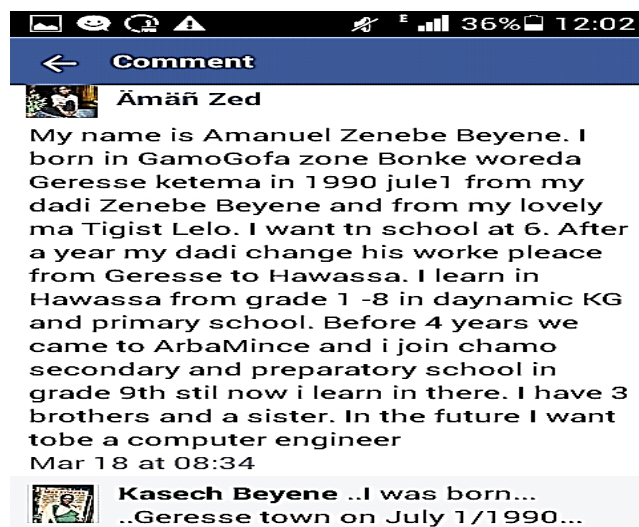


Figure 11: The fourth paragraph on writing about oneself

Compared to the earlier paragraphs, the beginning of each sentence in this paragraph is capitalized well. However, there are several grammatical errors. ‘I born in.. I want school.. after a year my dadi change his worke...’ are some examples. There are some spelling errors too. ‘Jule’ to mean July, in

the third line, ‘worke’ to spell work in the sixth line, and ‘pleace’ to mean place in the same line are some. Regardless of the errors, a reader with contextual understanding can understand the message the writer wanted to pass on in this paragraph..

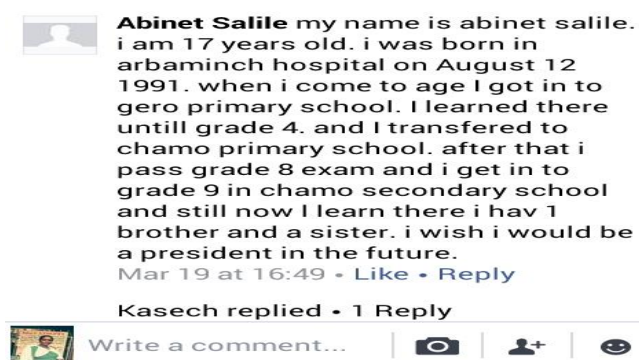


Figure 12: The fifth paragraph on writing about oneself

Like most of the previous paragraphs, the beginnings of each sentence are not capitalized. The third sentence reads strange. ‘when i come to age I got in to gero primary school’. This probably is to mean ‘when I was seven, I joined Gero Primary School’. Despite the organization, punctuation, and grammatical problems, the paragraph more or less gives sense..

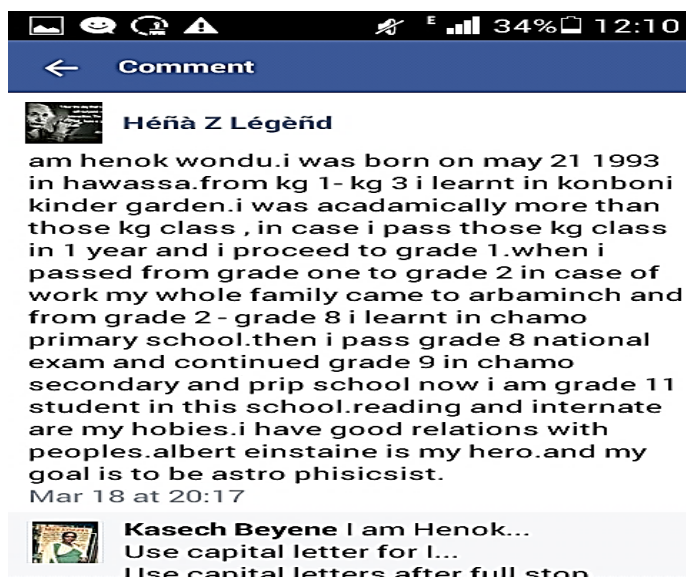


Figure 13: The sixth paragraph on writing about oneself

Henok’s paragraph starts with a sentence with no subject. The use of the phrase ‘in case’ in the second sentence is a misuse. In the same sentence, the simple present form of the verb ‘pass ’ was

used instead of the simple past. A new sentence should have started at ‘now i am grade 11 students’ Regardless of the problems mentioned, the paragraph is understandable to a reader.



Figure 14: The seventh paragraph on writing about oneself

In this paragraph, five of the sentences at the beginning are written together as one, with no period at the end of each. The last sentence is strangely written and reads as ‘in the future plan is Aretist’. As to the feedback provided, this probably is to mean ‘My future plan is to be an artist’. The word brother is spelled as berazor and the word artist is misspelled as Aretist in the second and last lines respectively. Yet, the content of the paragraph is understandable.

Most of the paragraphs in the three tasks have no topic and concluding sentences. All the paragraphs are full of spelling, capitalization, punctuation, grammar, and organization problems. This is strange as these students have spent 11 years studying English as a school subject. This devalues the significant difference in the test result observed between the experimental and control group. However, almost all the paragraphs were judged to be understandable to a reader.

4. Conclusions

The experimental group’s overall achievement over the control groups was found to be statistically significant. This revealed that the Facebook writing Group was more helpful than conventional writing in improving students’ paragraph writing. Nevertheless, the paragraphs have different quality

problems. The most commonly observed problems are punctuation, capitalization, and spelling. Grammar is also a problem in some cases. On the contrary, nearly all the paragraphs were understandable to a reader. As a result, teachers should consider using Facebook writing groups for teaching writing. Coursebook writers should also include writing tasks that can involve the use of technological tools. At least, Facebook can be used as an extension activity to classroom writing. They should also design tasks that help students improve their spelling, punctuation, grammar, capitalization, and organization. However, the study had some limitations. Despite the wide support in the literature for process approach technology-assisted writing, this study focussed on the product approach to teaching writing for ease of managing the experimental process. Moreover, cell phones were used for writing where at times writing was not easy because of small screens. Some of the errors in the students' writing might be attributed to this.

Appendices

Appendix I: This table shows the test score

Experimental group				Control group			
S. No	Pre-test	Post-test	Average	S. No	Pre-test	Post-test	Average
1.	14.00	16.00	15.00	1.	12.00	15.00	13.5
2.	12.00	15.00	13.5	2.	12.00	13.00	12.5
3.	16.00	18.00	17.00	3.	12.00	12.00	12.00
4.	18.00	20.00	19.00	4.	16.00	17.00	16.5
5.	12.00	18.00	15.00	5.	16.00	12.00	14.00
6.	12.00	13.00	12.5	6.	12.00	12.00	12.00
7.	14.00	15.00	14.5	7.	12.00	14.00	13.00
8.	12.00	17.00	14.5	8.	12.00	13.00	12.5
9.	17.00	18.00	17.5	9.	14.00	14.00	14.00
10.	13.00	15.00	14.00	10.	13.00	13.00	13.00
11.	18.00	18.00	18.00	11.	19.00	18.00	18.5
12.	12.00	18.00	15.00	12.	15.00	15.00	15.00
Total average	14.16	16.75	15.45	Total average	13.75	14.00	13.87

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