Effects of Process-Genre Based Approach on the Written English Performance of Computer Science Students in a Nigerian Polytechnic

Babalola, Halira Abeni Litinin
Department of General Studies, The Federal Polytechnic, Ede, P.M.B. 231, Ede
Osun State, Nigeria
E-mail: gbenihal2006@yahoo.com

Abstract
Writing is one of the four language skills which learners must acquire in order to be able to demonstrate competence in the use of English language. It is also considered as the most difficult because it requires the application of the knowledge of the other three skills. Research has shown that polytechnic students in Nigeria have difficulties in acquiring writing skills due mainly to the limited attention being paid to the teaching of writing and the use of out-dated and teacher-centred methodology. This study therefore aims at investigating the effect of the Process-Genre based approach (PGBA) on the written English performance of computer science students in the Federal Polytechnic, Ede. Nigeria. The quasi-experimental pre-test, post-test and control group design was adopted for the study. Four research questions and three null hypotheses were tested using the Analysis of Covariance (ANCOVA) at 0.05 level of significance. Results indicate that there is a significant effect of PGBA on the performance in written English of computer science students involved in the treatment.

Key words: Competence, Process-Genre, performance, Written English

1. Introduction
Students in Nigerian Polytechnics need to be competent in writing for a number of reasons. First is the fact that they need to acquire the certificates for which they have enrolled in the institution through written examinations, continuous assessment tests, assignments, and the writing of notes in class. In addition, the acquisition of written skills is important because even after graduation, students would require the skill in their work places. Good expression in writing often times determine whether an applicant gets or does not get employed in a country with a very high employment rate. Applicants needs all the advantages to move them forward, therefore, acquisition of good writing skills is a must for polytechnics students.

Research has however shown that students are generally poor in English language in general and writing in particular (Adesonoye 1976, Adegbile 1985, Aboderin 1992, Iyaba 1993, Awodele 1998, 2003 and Kolawole 1998). Several reasons have been put forward as being responsible for this state of affairs. These reasons can be grouped into two; teachers and teaching methodology and students’ attitude and motivation.

Teachers of writing are usually overwhelmed by the unusually large class size; they therefore adopted the easy way out, that is, the lecture method which does not require much from the teacher other than the presentation of the lecture over one or two hours in class. However, research has shown that for learners to benefit optimally there has to be practical applications of what is taught. If learners are taught how to write, they should be made to write. Frequent writing practice however, requires that teachers would need to grade students scripts and where the classes are large then teachers have problems. Also, teachers have limited access to new approaches and research findings that have been proven to be effective in ensuring that learners acquire writing skills. Teachers also have problems with not only the application of these approaches but also, the performance of classroom research in their classes (Babalola 2011). All these factors affect the teaching of writing which in turn affects how students learn. In addition, students of polytechnics in Nigeria see themselves as potential professionals in various fields and not as language students. They perceive language courses as ‘none core’ courses that have been included to distract rather than educate them. Students are therefore not motivated to learn through appropriate class participation.

2. Literature Review
The process-Genre approach to the teaching of writing is a combination of the process models and the genre theories which came about with the realisation of the limitations of both the process and the genre approaches in developing learners’ writing skills. In the views of Matsuda (2003) the process approach was considered to be the most successful approach in the history of pedagogical reforms in
the teaching of writing and it was therefore widely applied by many scholars in their writing classes (Bazerman 1980, Horowitz 1986, Badger & White 2000, Zeng 2005). Limitations of the process approach however, led to the development of the genre approach, the essence of which is to teach learners the conventions of different text types which include the layout and the presentation as well as the language (Babalola 2011).

The positive effects of the genre approach on the teaching of writing were also acknowledged by many scholars (Badger & White 2000, Hyland 2003, Paltridge 2004, Kim & Kim 2005, Yan 2005, Zeng 2005, Goa 2007). However, limitations of the approach led to the conclusion that using the genre approach exclusively might not be capable of making learners competent writers. Badger & White (2000) therefore, proposed a marriage of the two approaches under discussion, hence the development of the process-genre based approach to the teaching of writing. The process-genre approach is therefore according to Frith (2006) and Goa (2007) a hybrid, the combination of two approaches which takes into consideration the development of the writing skills as well as the conventions, concept of which not only draws from the genre approaches such as knowledge of context, the purpose of writing and certain text features but also retains the process philosophy such as writing skills development and learners’ response. The process-genre approach in the views of Goa (2007), characterizes not only the learners’ creative thinking and the act of how writers form text, but also the knowledge of linguistic features as well as specific discourse community where a particular genre performs.

2. Methodology

The design used for this study is the quasi-experimental with pre-test, post-test and control groups. Three research questions were formulated while three research hypotheses were tested in the study. The participants for this study were 40 HND1 students of computer science both male and female. The students are majoring in computer science but by the curriculum have to undergo compulsory language courses in each of the four semesters. The students were randomly selected from two intact classes and were divided into two groups of 20 students each (Groups 1&2). Two researcher designed instruments were used for the study; the process-genre based approach instructional manual (PGBAIM) and the written English performance test (WEPT). The content of the manual was based on an adaptation of Lin’s (2006) Curriculum cycle and Kim & Kim’s (2005) four suggested principles of balanced instruction. All the students were made to write the pre-test which was an essay test. Students in Group 1 were subjected to treatment with the process-genre based approach in essay writing four hours per week for six weeks. Students in group 2 were taught using the traditional lecture method. The students were also made to write a post-test after the treatment. The data collected was analysed using Analysis of Covariance (ANCOVA) at 0.05 level of significance.

3.1 Research questions

1. Will there be any difference in the effect of Process-Genre Based Approach (PGBA) on computer science students’ performance in written English?
2. Will there be any difference in the effect of PGBA on the students’ performance in the four writing attributes: organization, Content, Expression and Linguistic Accuracy?
3. Will there be any difference in the effect of PGBA on students’ performance in written English on the basis of gender?

3.2 Research Hypotheses

Ho1: There will be no significant difference in the effect of PGBA on computer science students’ performance in written English.

Ho2: There will be no significant difference in the effect of PGBA on students’ performance in written English in each of the four writing attributes: organization, Content, Expression and Linguistic Accuracy?

Ho3: There will be no significant difference in the effect of PGBA on computer science students’ performance in written English on the basis of gender.
4. Results
The data collected from the study was analysed using analysis of covariance and the results are presented below.

**Ho1**: There will be no significant difference in the effect of PGBA on Computer Science Students performance in written English.

To test this hypothesis, an Analysis of Covariance was performed and the result is presented in table 1 below.

<table>
<thead>
<tr>
<th>Source</th>
<th>Type 111 sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>1304.745a</td>
<td>2</td>
<td>652.373</td>
<td>133.928</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>149.120</td>
<td>1</td>
<td>149.120</td>
<td>30.613</td>
<td>.000</td>
</tr>
<tr>
<td>Pre-total</td>
<td>224.457</td>
<td>1</td>
<td>224.457</td>
<td>46.080</td>
<td>.000*</td>
</tr>
<tr>
<td>Treatment</td>
<td>180.230</td>
<td>37</td>
<td>4.871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>8481.000</td>
<td>40</td>
<td></td>
<td>133.928</td>
<td>.000</td>
</tr>
<tr>
<td>Total</td>
<td>1484.975</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significantly Different, P<.05

**Table 1**: Analysis of Covariance (ANCOVA) Showing the Effect of PGBA on Students’ Performance in Written English.

The result in table 1 shows that there is a significant effect of PGBA on the performance in written English of students involved in the experiment with P value of .000. That is, P < 0.05. Therefore, students in the treatment group benefited significantly and this implies that PGBA if used can help to improve students’ writing skills.

**Ho2**: There will be no significant difference in the effect of PGBA on students’ performance in written English in each of the four writing attributes: organisation, Content, Expression and Linguistic Accuracy?

To test this hypothesis, an Analysis of Covariance was performed and the result is presented in table 2 below.

<table>
<thead>
<tr>
<th>Writing Attributes</th>
<th>Source</th>
<th>Type 111 sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORG</td>
<td>Corrected model</td>
<td>11.678</td>
<td>2</td>
<td>5.839</td>
<td>12.400</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>3.578</td>
<td>1</td>
<td>3.578</td>
<td>5.337</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Pre-total</td>
<td>5.337</td>
<td>1</td>
<td>5.337</td>
<td>4.71</td>
<td>.002*</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>17.422</td>
<td>37</td>
<td>.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>354.000</td>
<td>40</td>
<td></td>
<td>102.682</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29.100</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONT</td>
<td>Corrected model</td>
<td>205.364</td>
<td>2</td>
<td>102.682</td>
<td>110.006</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>37.658</td>
<td>1</td>
<td>37.658</td>
<td>40.344</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Pre-total</td>
<td>11.764</td>
<td>1</td>
<td>11.764</td>
<td>12.603</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>61.050</td>
<td>1</td>
<td>61.050</td>
<td>65.405</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>34.536</td>
<td>37</td>
<td>.933</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1220.000</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXP</td>
<td>Corrected model</td>
<td>239.900</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MECH ACC</td>
<td>Corrected Total</td>
<td>2</td>
<td>105.433</td>
<td>184.803</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Significantly Different, P<.05
The results in table 2 show that there is a significant effect of PGBA on students' performance in all the four writing attributes: Organization, Content, Expression and mechanical Accuracy with P values of .000. That is, in each case, the values of P < 0.05 were obtained.

**Ho3: There will be no significant difference in the effect of PGBA on computer science students’ performance in written English on the basis of gender.**

To test this hypothesis, an Analysis of Covariance was performed and the result is presented in table 3 below.

**Table 3: Analysis of Covariance (ANCOVA) Showing the Effect of PGBA on Students’ Performance in Written English on the basis of Gender.**

<table>
<thead>
<tr>
<th>Source</th>
<th>Type 111 sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1085.818</td>
<td>2</td>
<td>542.909</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Pre-total</td>
<td>2.793</td>
<td>1</td>
<td>50.325</td>
<td></td>
<td>.614</td>
</tr>
<tr>
<td>Treatment</td>
<td>1065.389</td>
<td>1</td>
<td>2.793.259</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>5.530</td>
<td>1</td>
<td>1065.389</td>
<td></td>
<td>.479 NS*</td>
</tr>
<tr>
<td>Total Corrected</td>
<td>399.157</td>
<td>37</td>
<td>98.757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8481.000</td>
<td>40</td>
<td>5.530</td>
<td>.513</td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1484.975</td>
<td>39</td>
<td>10.788</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NS = Not significantly Different, P>0.05

The result in table 3 shows that there is no significant difference in the effect of PGBA on students’ performance on the basis gender. Both male and female participants in the treatment group benefited equally from the treatment with P value of .479 which is not significant at P>0.05.

### 5. Discussion

The findings of this study revealed that Process-Genre Based Approach to the teaching of writing had significant effect on the students’ written English performance. The post-test scores of the students in the treatment group were significantly higher than that of the students in the control group which implied that students in the experimental group benefited significantly from the treatment. The students improved performance could be attributed to the student-centred, practical and flexible nature of the process-Genre Approach. The finding is consistent with the results of previous studies (Babalola 2011, Cheng 2008, Goa 2007, Voon Foo 2007, Frith 2006 and Ming 2006). The approach as stated earlier is a combination of two approaches (Process and Genre). The teachers were able to provide situations for
learners to identify the purpose, mode, field and tenure of the writing and with adequate support and motivation, learners were able to develop and use appropriate writing skills. Also corroborating, Kim & Kim (2005) assert that the Process-Genre approach provides opportunities for learners to develop their individual creativity and that it helps them to fully understand the features of target genres.

6. Conclusion

Research has shown that polytechnic students lack effective writing skills. Also, these group of learners need to acquire these skills in order to succeed both academically and professionally. Therefore, the need for the application of effective approaches to writing instructions in the classroom cannot be over emphasized. Findings from this study has established that learners’ written English performance improved significantly as a result of the treatment with the process-genre based approach (PGBA). The effect was significant in the overall performance as well as for each of the four attributes of writing. If effectively applied therefore, PGBA is capable of ensuring that learners acquire requisite writing skills. However, additional effort is required of teachers in the aspects of materials, class control and effective feedback so that learners would have adequate information on their progress. There should be effective use of student/student feedback, teacher/student conferencing, and use of portfolio as well as genuine interest in the students’ development.

References


Iyagba, B. (1993). Reading-Writing and Discussion Strategies as Determinants of Secondary Students’ Achievement and Attitude in English Composition Writing Skills. Seminar paper Presented at the Department of Teacher Education, University of Ibadan, Nigeria.


This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE’s homepage: [http://www.iiste.org](http://www.iiste.org)

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. **Prospective authors of IISTE journals can find the submission instruction on the following page:** [http://www.iiste.org/Journals/](http://www.iiste.org/Journals/)

The IISTE editorial team promises to the review and publish all the qualified submissions in a fast manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

**IISTE Knowledge Sharing Partners**

- EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar