EFFECTIVENESS OF CLUSTERING TECHNIQUE IN ENHANCING CREATIVITY IN DEVELOPMENT OF PARAGRAPH IN ESSAY WRITING AMONG SECONDARY SCHOOL STUDENTS

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Abstract
The study investigated the effectiveness of Clustering Technique in enhancing creativity in development of paragraphs in Essay writing among senior secondary school students in Nsukka Education Zone of Enugu State, Nigeria. The design of the study was pretest, post-test non randomized quasi experimental design. The population of the study comprised all the senior secondary school students in Nsukka Education Zone of Enugu State. 86 senior secondary school male and female (41 males and 45 females) students were purposefully sampled for the study. Two research questions and four null hypotheses guided the study. Data were collected using Paragraph Development in Essay Writing Creativity Test (PDEWCT). The data collected were analyzed using Mean, Standard Deviation and Analysis of Covariance (ANCOVA). The results obtained showed that Clustering Technique enhances creativity in paragraph development in Essay writing. It also showed a significant difference in the mean creativity of male and female students. It was therefore recommended that Clustering Technique should be adopted as a teaching technique in Essay writing in secondary schools

Keywords: Clustering Technique, Creativity, Development of Paragraphs, Essay Writing.

Introduction
There is no gainsaying that the importance of acquisition of good writing skills among secondary school students can never be overstressed. Writing skills is one of the linguistic skills that exhibit a very incalculable influence in the lives of every student. Mgbodile (1999) posits that proficiency in writing in today’s diverse society is the key to the world’s pool of knowledge. Through writing, one crafts, fashions, shapes and gives voice to a whole lot of ideas. Muodumogu and Unwaha (2013) lend credence to the view above, and posit that writing is one of the most important activities of a literate community. According to the authors, students need to read so as to learn about the world, but they need to write so that they can change the world. Writing encourages critical thinking and equally makes critical thoughts available. It is one of the linguistics skills which a lot of importance is attached to. Good writing skill can be a very satisfying experience for anybody that acquires it. However, lack of good writing skill masks one’s true intellectual abilities and capabilities.
It is noted by the Summer Institute of Linguistics (SIL, 1999) that writing is the hardest of all the language skills. That may probably explain the reason why writing is not learnt or taught until one acquires listening, speaking and reading skills. It is important also to note that despite the difficult nature of writing skill, it is one of the most constantly demanded task from secondary school students. Most of their examination papers and assignment in English and other subjects demand essay writing-type answers. Okonkwo (2004) also notes that essay writing is important to the academic achievements of students in English because it carries about 40-45% of the 100% that is allotted to the entire skills in English. Adegbite and Alabi (2007) remark that there is a correlation between students’ ability to write good essays and their performance in English and other subjects. Essay writing is an important skill which every student should pay attention to.

However, writing as important as it is to mankind, Nigerian students exhibit very low proficiency in it. Adewusi (2013) reported that students’ performance in English in Senior Secondary School Certificate Examination (SSCE) conducted by the West African Examination Council (WAEC) from 2008-2012 has been very poor. According to the report, the percentage of the candidate that obtained credit and above in English in the said examination in 2008, 2009, 2010, 2011 and 2012 are 23.5%, 25.99%, 24.94%, 30.70% and 20.45 respectively. This report showed students’ abysmal failure rate in English. Komolafe and Yara (2010) traced the poor performance of students in English to their inability to write effectively. Also, the report of the chief Examiner of West African Senior Secondary School Certificate Examination (2017) lend credence to the above view and indicated that the weaknesses observed in the scripts of candidates were attributed among other things to their inadequate exposure to the skill of writing and failure to grasp the requirement and demands of the attempted questions because of their inadequate experience.

Several methods which include: the guided method, unguided method and the literary method are being used to teach essay writing in secondary schools. The guided method just as the name suggest entails the teacher working with a group of students to produce essays or composition. Guidelines are given to the students to help them to produce composition. In the unguided method, students are given topic and are allowed to produce essays or composition on their own. Literary method exposes the students to the theme, structure, tones and styles. Muodumogu and Unwaha (2013) remark that these methods have not helped to improve students’ achievement in essay writing. This may probably be because these methods have one thing in common; they deal with an essay as a whole not in compartments. They do not expose students on how to develop paragraphs. Nurul (2018) points out that teaching writing is as important as finding out technique of helping students to use their skills in writing. Composing a continuous prose depends on a principle of good composition of ideas in systematic and coherent paragraphs. Good paragraphing is
essential to essay writing. An essay that is not well organized poses reading problems
to the reader. Reading an essay that is not organized in paragraphs can be compared
to climbing a steep mountain without a rope, steps or a guide, (Obasikene, Agbo, Odo,
students exhibit low paragraphing skill and consequently their essay are marred by
isolated units. The WAEC chief examiner’s Report (2017) revealed that candidates’
scripts were marred by poor paragraphing resulting in illogical and unbalanced
presentation of ideas especially in essay writing and letter writing. Good paragraphing
is both a resting place for the eyes and a signpost indicating that a new development
in the writer’s line of thought is being opened. It helps the writer in the development
of his line of thoughts and enables him to address or discuss ideas in bits, and as well
sustain the central theme.

Clustering technique is being tried in this work to ascertain its efficiency in
enhancing students’ creativity in development of paragraphs. It is a technique that
exposes students on how to develop ideas by associations of other ideas. Nurul (2018)
notes that this technique unlocks natural writing skills in children. The technique
involves writing down a word or a phrase and engaging other words or phrases that
can be associated with that head word of phrase. Each written association is
connected to the original stimulus (head word or phrase) with an arrow or line. If
associations prompt with an or generate further association, chains of associated
words or phrases are produced. It is assumed that students will be motivated to write
further about the produced association made during clustering exercise. Those
associations will provide direction for development of paragraphs.

Clustering Techniques Sample:

**Step 1:** Get a blank piece of paper and in the middle of it, write a topic and circle it.

**Step II:** Around the first circle, write other ideas that can be associated with the main
topic. For example, in the middle of the blank sheet, one might write “Development
of effective writing skill” as a topic and circle it. Then around the circle, one is required
to write those ideas that can be associated with effective writing skill, for instance,
listening effectively, reading other write ups, writing. One can ask question, like, what
should one listen to? What does one need to read and what should one be writing?
Those are sub topics (paragraphs)

**Step 3:** Circle the sub topics and draw lines from the main subject to the sub topics.

**Step 4:** Around each sub-topic, write phrases that can be associated with it. For
example, around the sub-topic “by listening” write whatever ideas that can be
associated with listening. What does one listen to: television news, Radio
programmes, motivational speaker, etc.
Step 5: Circle these new sub topics and connect them to initial sub sub-topics. Extend sub-topics such as much as possible. Those sub-topics are paragraphs. Below is the diagrammatic example of Clustering Technique:

Statement of the Problem
Essay writing is an important part of human learning. Evidence from literature revealed that it is the most important of all the language skills. It was equally revealed that it is a very complex activity and as such, students do not achieve well in it. The methods that are being used to teach essay writing in secondary schools address essays holistically. They do not expose students to ways of developing ideas in paragraphs and consequently, they do not achieve well in it. The problem of this study
is therefore to determine the effectiveness of clustering technique in enhancing students creativity in development of paragraphs in essay writing.

**Purpose of the Study**

The general purpose of this study is to determine the effectiveness of clustering technique in enhancing students’ creativity in development of paragraphs in essay writing.

Specifically, the study is sought to determine:

1. Effect of clustering technique on students’ creativity in development of paragraphs in essay writing
2. Influence of gender on students’ creativity in development of paragraphs in essay writing.
3. Interaction effect of technique and gender on students’ creativity in development of paragraphs in essay writing

**Research Questions**

1. What is the effect of clustering technique on the creativity of students in development of paragraphs in essay writing?
2. What is the influence of gender on the creativity of students in development of paragraphs in essay writing?

**Hypotheses**

The following null hypotheses were tested at 0.05 level of significance.

$H_01$: There is no significant difference in the creativity scores of students taught paragraph development in essay writing using clustering technique and those taught using the unguided method.

$H_02$: There is no significant difference in the mean creativity scores of male and female students in paragraph development in essay writing.

$H_03$: There is no significant interaction effect of techniques and gender on the mean creativity scores of students taught paragraph development in essay writing.

**Methodology**

The design for this research is quasi-experimental design. The study was conducted inNsukka Education Zone of Enugu State, Nigeria. Pre-test, post-test non randomized control group design was adopted. A sample of 86 students were used for the study. Two co-educational schools were purposively selected from the area of the study. Two intact classes were used for the study and subjected to treatments using unguided method and clustering technique. The instrument for data collection is Paragraph Development in Essay Writing Creativity Test (PDEWCT). They constitute three essay writing topics adapted by the researchers from West African Examination
Council (WAEC) questions papers of 2015, 2016 and 2017. The reliability of the instrument was determined by administering the questions to SS2 students in another zone who did not form part of the sample for this study. Kendall coefficient of concordance was used to estimate the scorer reliability of PDEWCT because the scoring was done by two scorers. Thus, the scorer reliability index of 0.68 was obtained. The English teachers in the sampled schools who served as research assistants were trained by the researchers. The training included the purpose of the study and the procedures of administering the instrument before and after the treatments. The research questions were analyzed using mean and standard deviation while the research hypotheses were tested at 0.05 level of significance using analysis of covariance.

Results
The results were presented in line with the research questions and hypotheses that guided the study.

Research Question One: What is the effect of clustering technique on the creativity of students in development of paragraphs in essay writing?

| Table 1: Mean and standard deviation of creativity scores of students taught development of paragraphs using clustering technique and those taught using unguided method |
|---|---|---|---|---|---|
| Treatment               | Pre-test |  |  | Post-test |  |
|                        | n  | Mean | SD | Mean | SD |
| Clustering Technique   | 46 | 15.78 | 7.97 | 33.41 | 15.61 |
| Unguided Method        | 40 | 15.77 | 9.57 | 24.12 | 11.25 |

Table 1 shows that the students who were taught using clustering technique in development of paragraphs in essay writing had mean creativity score of 15.78 with a standard deviation of 7.97 at the pre-test and a post-test mean creativity score of 33.41 and standard deviation of 15.61 while those who were exposed to unguided method had mean creativity score of 15.77 with a standard deviation of 9.57 at the pre-test and a post-test mean creativity score of 24.12 and standard deviation of 11.25. This indicates that the students who were exposed to clustering technique had higher post-test mean creativity score than their counterpart who were exposed to unguided method. However, the post-test standard deviations of 15.61 and 11.25 for the two groups respectively imply that the experimental group varied much in their individual creativity scores than the control group.

Ho: There is no significant difference in the creativity scores of students taught development of paragraphs in essay writing using clustering technique and those taught using unguided method.
Table 2: Analysis of covariance of the effect of methods on students’ creativity in development of paragraphs in essay writing

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III 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>14193.891</td>
<td>4</td>
<td>3548.473</td>
<td>80.526</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>211.953</td>
<td>1</td>
<td>211.953</td>
<td>4.810</td>
<td>.031</td>
</tr>
<tr>
<td>Pretest</td>
<td>11900.384</td>
<td>1</td>
<td>11900.384</td>
<td>270.057</td>
<td>.000</td>
</tr>
<tr>
<td>Treatment</td>
<td>5228.164</td>
<td>1</td>
<td>5228.164</td>
<td>118.643</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>73.085</td>
<td>1</td>
<td>73.085</td>
<td>1.659</td>
<td>.201</td>
</tr>
<tr>
<td>Treatment * Gender</td>
<td>.784</td>
<td>1</td>
<td>.784</td>
<td>.018</td>
<td>.894</td>
</tr>
<tr>
<td>Error</td>
<td>3569.365</td>
<td>81</td>
<td>44.066</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90554.000</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>17763.256</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .799 (Adjusted R Squared = .789)

Table 2 shows that clustering technique had significant effect on the students’ creativity in the development of paragraphs in essay writing, $F(1, 81) = 118.643, p = 0.000$. Since the probability value of 0.000 is less than the 0.05 level of significance ($p < 0.05$), the null hypothesis was rejected.

Research Question Two: What is the influence of gender on the creativity of students in development of paragraphs in essay writing?

Table 3: Mean and standard deviation of creativity scores of male and female students in development of essay writing

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Male</td>
<td>41</td>
<td>16.9</td>
<td>8.54</td>
<td>27.36</td>
</tr>
<tr>
<td>Female</td>
<td>45</td>
<td>19.15</td>
<td>9.46</td>
<td>30.66</td>
</tr>
</tbody>
</table>

Table 3 reveals that female students had post-test mean creativity score ($M = 30.66, SD = 14.27$) than the male students ($M = 27.36, SD = 14.63$). The post-test standard deviations of 14.63 and 14.27 for the male and female students respectively show that male students varied much in their individual creativity scores than the female students.

$H_{02}$: There is no significant difference in the mean creativity scores of male and female students in development of paragraphs in essay writing.

Table 2 shows that the gender does not have significant influence on the students’ creativity in the development of paragraphs in essay writing, $F(1, 81) = 1.659, p=$
0.026. Since the probability value of 0.026 is greater than the 0.05 level of significance (p > 0.05), the null hypothesis was not rejected.

**H0**: There is no significant interaction effect of methods and gender on mean creativity scores of students in expository essay.

Table 2 shows that there is no significant interaction effect of methods and gender on mean creativity scores of students in the development of paragraphs in essay writing, \( F (1, 81) = 0.018, p = 0.894 \). This implies that students’ creativity in development of paragraphs in essay writing as a result of their exposure to clustering technique does not depend on gender.

**Discussion of Results**

The result of the study showed that clustering technique enhances students’ creativity in development of paragraphs in essay writing. The students that were taught essay writing using the clustering technique had higher mean creativity scores than their counterparts who were taught using unguided teaching method. This result confirmed the assertion made by Igbokwe (2009) that there is no best all round approach but some approaches may be better than others in teaching a particular skill. The results agree with the findings of Nurul (2019) which revealed that clustering technique stimulates creativity and helps students to achieve significantly in writing paragraphs.

The result of the study also showed that there was a significant difference in the mean creativity scores of male and female students taught essay writing using clustering technique and those taught using unguided method. This implies that gender has a significant effect on students’ creativity in paragraph development in essay writing. This result is in tandem with that of Gasva and Moyo (2014) which revealed that gender has significant influence on students’ achievement in some school subjects.

The fact that the interaction effect of the treatment and gender was not significant shows that students’ creativity in paragraph development in essay writing as a result of their exposure in clustering technique does not depend on gender.

**Conclusion and Recommendations**

The result of the study showed that clustering technique had positive effect on students’ creativity in development of paragraphs in essay writing. Thus, students who were taught with clustering technique had higher mean creativity scores than their counterparts who were taught with unguided method. The result also shows that gender had significant influence in secondary school students’ creativity in paragraph development in essay writing. Based on these findings, the following recommendations were made: that clustering technique should be adopted as a teaching strategy for essay writing in secondary schools; that relevant bodies lie
Universal Basic Education, Universities and Colleges of Education should from time to time organize workshops, conferences, seminars for English teachers on the use of clustering technique in teaching essay. It is also recommended that curriculum developers should include the use of clustering technique as an effective strategy for teaching essay writing in the next review of curriculum.

References