

CONCEPT MAPPING STRATEGY FOR TEACHING ENGLISH ESSAY WRITING: A PIVOT FOR RE-POSITIONING EDUCATION IN NIGERIA THROUGH COMPETITIVENESS, INNOVATION AND ENTREPRENEURSHIP

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Abstract

This study, “Concept Mapping Strategy for Teaching English Essay Writing: A Pivot for Re-positioning Education in Nigeria through Competitiveness, Innovation and Entrepreneurship” adopted a pre-test, post-test, control group quasi-experimental design. Study population was 8,682 Senior School 2 students in 73 public co-educational schools in Owerri Education Zone 1, Imo State. 86 SSS students (27 males and 59 females) formed the sample size, using cluster and purposive sampling techniques. Two schools in Owerri Municipal, one for Experimental Group and the other for Control Group were selected, adopting intact class method. Essay Writing Test for Senior School Students (EWTSSS) with $r = .63$ was used for data collection. Three hypotheses were raised. Data was analysed using ANCOVA. Findings showed significant main effect of treatment on students’ achievement in English essay writing ($F_{(1, 81)} = 11.027, p < 0.05$), Partial Eta Square ($\eta^2 = 0.320$) which implies that treatments accounted for 32% variance observed in students’ achievement. Main effect of gender on students’ achievement was not statistically significant ($F_{(1, 81)} = .873, p > 0.05$). Interaction effect of treatment and gender ($F_{(1, 81)} = 1.706, p > 0.05$) was not statistically significant. Concept Mapping Strategy is recommended for teachers to enhance students’ better achievement in essay writing to re-position education in Nigeria.

Keywords: Concept Mapping Strategy, Conventional Method, Essay writing, re-positioning education, competitiveness, innovation, entrepreneurship

Writing is the presentation of meaningful graphic symbols. It is an important skill that students must acquire very perfectly to reposition them through competitiveness and innovation for career development and academic excellence. Innovation is the making of a change in something established to bring novelty and allow competitiveness. Therefore, in the present world of mass unemployment, innovation and entrepreneurship are encouraged. According to Sultan (2014), even small scale businesses and labour markets are over-flooded with graduate applicants seeking employment when only the privileged few will be selected to occupy the limited vacancies due to lack of proficiencies in applicants’ fields of specialization because of inability to write well. Ability to achieve mastery in writing is a major facet of language teaching and learning

that also determines students' academic success right from basic education stage to their tertiary education attainments (Mukulu, Indangasi, Mwangi, Gecaya & Okanga, 2006). Adams and Keene (2000) noted that learning to write skilfully can help students who later join the world of job seekers and applicants to deal successfully with their academic demands and to perform excellently in their disciplines and professional endeavours.

In the academic context, students are required to produce specific writing genres such as essays, summaries and reports (Dudley-Evans, 2001). However, learning to write in a first (L1), second (L2) or foreign language (FL), as required in the today's world of entrepreneurship, seems to be the most difficult skill for language learners to acquire (Negari, 2011). No wonder, Richards (2008) and Novak and Canas, (2008) noted that learning to write in second language is one of the most difficult tasks students encounter and only a few people can be said to have fully mastered it. Thus, it is a challenging and difficult skill for both native and non-native speakers to acquire as Hyland (2003) noted that writing requires composing, which implies the ability either to tie pieces of information in the form of narratives or description, or transform information into new texts, as in expository or argumentative writing. Therefore, it is viewed as a continuum of activities that range from the more mechanical or formal aspects of writing to the more complex act of composing.

Writing, when compared with other language skills of listening, speaking and reading, is the most difficult skill to learn because it requires writer's ability to have a great deal of lexical and syntactic knowledge as well as principles of organization in English language (learners' L2) to produce a good written text (Tangpermpoon, 2008). On the other hand, Khajavi and Ketabi (2012) observed that the ability to write well is not naturally acquired from the environment through exposure to the language. He argues that writing is learned or culturally transmitted as a set of practices in formal instructional setting. Similarly, Byrne (2010) noted that writing is learned through a process of instruction in which the student is expected to master the written form of the language and to learn certain structures that are not common in speech but which are vital for effective written communication. He further observed that conscious effort must be made to equip language learners with writing skills which will enable them to organize their ideas so that a reader who is not present or known to them can understand. In addition, Hyland (2003) asserted that writing is an activity which must be mastered in order for students to express their ideas effectively in writing in the present world of competition, innovation and skill acquisition (entrepreneurship). Therefore, it is imperative for teachers to help students learn writing skills that will enable them express themselves appropriately and effectively in L2.

Ong'ondo (2011) identified two broad categories of writing, namely: functional and creative. Functional writing involves writing of letters, minutes, reports, notices, speeches, book reviews, and memoranda among others that develop learners to become journalists, successful secretaries, novelists, playwrights and acclaimed personalities in the literary world. On the other hand, creative writing is concerned with the ability either to tell or retell pieces of information in the form of narration, description and can also be used to transform information into new texts such as in exposition and argumentative writing. Beydarani (2015) also classified writing skills into two classes: basic and advanced. Basic skills involve good handwriting, proper spelling and correct punctuation. Advanced skills are those related to proper organization of ideas, correct use of grammar and originality of expression. In addition, Graham and Perin (2007)

claimed that a well-written essay and all creative writings focus on the topic and have an organizational pattern that enables a reader to follow the flow of ideas. It also contains supporting ideas that are developed through the use of examples, appropriate vocabulary and follows conventions. But it sounds so appalling that a good percentage of our school students are not proficient in creative writing and lack the spirit of competitiveness and innovation that will enhance entrepreneurship. In order to reposition education in Nigeria, school learners must be adequately taught the arts of writing in the learners' L2 in a creative way so as to encourage competitiveness, innovation and entrepreneurship. This, however, must be the desire of teachers of English who need to vary their teaching methods to using Concept Mapping strategy to enhance better achievement that is desired for repositioning education in Nigeria.

Many methods have been tried in teaching and learning essay writing, yet students' achievements have remained low. The methods include: (1) the guided method, which gives students guidelines to help them write or produce correct compositions. (2) The non-guided method which is also called free composition where the students are given topics and allowed to produce correct essays on their own and (3) the literacy method which provides students with the necessary experience in the theme, structure, tone and other aspects of style (Awofala, 2011). These methods of writing are used in the conventional classroom and they emphasize the product of the students' writing without bothering whether or not the students have learnt the skills of writing.

The conventional method of teaching has not given students much assistance and part of the reasons for this according to Obi-Okoye (2004) is that writing is one of the skills that are not amenable to mere memorization of a set of rules because it calls for development and application of composite skills in the writing process. Not until teachers start teaching students to see writing as a process of discovering, exploring ideas and constructing frameworks with which to present ideas, there will be little or no improvement in students' essays in this present world of competition. It is suggested that the teaching of essay writing and indeed other aspects of language skills behoves on the language teacher to adopt some innovative methods in line with global best practices (Muodumogu and Unwaha, 2013). One of the innovative methods that could improve students' art of writing and impact positively on their essay writing skill is the use of concept mapping strategy.

Concept maps are graphical tools for organizing and representing knowledge. They include concepts, usually enclosed in circles or boxes of some type, and relationships between concepts indicated by a connecting line linking two concepts. Words on the line are referred to as linking words or linking phrases that specify the relationship between the two concepts. Nada (2008) conceived concept as a perceived regularity in events or objects, or records of events or objects, designated by a label. Concept maps are represented in a hierarchical fashion with the most inclusive, most general concepts at the top of the map and the more specific, less general concepts are arranged hierarchically. The hierarchical structure for a particular domain of knowledge also depends on the context in which that knowledge is being applied or considered. Singh and Moono (2015) stated that concept mapping is a teaching and learning strategy that helps students to organize concepts into hierarchies. It is a pedagogical/Meta cognitive tool designed to help students learn how to learn (Tarkashvand, 2015).

The use of concept mapping in addressing the challenges facing students in essay writing could therefore prove worthwhile. More so, there will be the need to

establish whether the strategy has equal significance for both male and female students in essay writing achievement. Khajavi and Ketabi (2012) stated that one of the most topical issues in the current debates and researches all over the world has been that of gender differences and academic achievement among students in schools. Gender is the social and constructed differences in women's and men's roles and responsibilities, which are learned, vary from culture to culture and change over time (United Nations Girl Education Initiative (UNGEI, 2012). While sex is biological, gender is a product of human construction that is said to affect all spheres of male and female interactions. Whether this will affect the use of concept mapping strategy in teaching essay writing among senior school students to enhance repositioning education in Nigeria through competitiveness, innovation and entrepreneurship holds equal attraction to this study.

Statement of the Problem

The rate, at which many senior school students express low level of mastery in essays and creative writing, demonstrate poor word choice, wrong grammar and spelling, lack of logical argument and coherence calls for serious concern. Essay writing skills are life-long skills that transcend the academic environment which, if a student fails to acquire inhibit his chances in life and his success in his chosen profession. Could it be that most students perform badly in essay writing because their English language teachers have maintained the old methods they are familiar with? What will be the effect of concept mapping strategy on secondary school students' achievement in essay writing? Many candidates showed low level of content mastery as majority of them write poor essays, lack innovations and creativity, demonstrated poor word choice, wrong grammar and spelling, lack logical argument and coherence. This therefore stands the need for this study to examine the Concept Mapping Strategy and gender effects on students' achievement in English language essay writing in order to reposition education in Nigeria through competitiveness, innovation and entrepreneurship.

Hypotheses

The following hypotheses were raised and tested at 0.05 level of significant

H₀₁: There is no significant main effect of Treatments (Concept Mapping Strategy and Conventional instruction method) on students' achievement in English Essay Writing.

H₀₂: There is no significant main effect of gender on students' achievement in English Essay Writing.

H₀₃: There is no significant interaction effect of treatment and gender on students' achievement in English Essay Writing.

Methodology

This study adopted a 2 x 2 pre-test and post-test, control group, quasi-experimental research design. The population for this study comprised all (8,678) senior secondary two students in 73 public secondary schools in Owerri Education Zone 1, Imo State. The selected schools were two co-educational senior schools randomly assigned to treatment: Experimental and the Control Groups. Also in each of the selected schools, simple random sampling was adopted to select one arm of Senior Secondary school class two (SSII) for the study. School A: The Experimental Group was a class of 41 students with 28 female and 13 male students while School B: The Control Group, was a class of 45 students with 31 female and 14 male students respectively, using intact class

technique. In all, 86 (27 males and 59 females) participated in the study. 'Essay Writing Test for Secondary School Students' (EWTSSS) was the only researcher-made instrument validated and pilot-tested with KR₂₁ (Kudder Richardson, 21) $r = 0.63$ to generate data for the study. Treatment Group was exposed to English essay writing using Concept Mapping Strategy while control group was taught same English essay writing using Conventional Method (Lecture Method). The data generated were subjected to Analysis of Covariate (ANCOVA). The used of ANCOVA corrected for the initial differences in the dependent variable and other extraneous factors, using the pre – test scores as covariance. Sidak Post hoc test was further conducted to determine the source of the significant main effect.

Control of Extraneous Variables

The following extraneous variables that were likely to interfere with the experiment were taken care of:

Teacher Variable: When different teachers are involved in an experiment, the problem of teacher variable may arise since teachers may differ in terms of knowledge of content, experience and methodology. To guard against this, teachers were trained using the lesson note. Again, the assignment of two teachers per group was to take care of variation in quality of teachers.

The EWTSSS was arranged to differ from the pre-test and was thereafter administered on both groups. The essence was to find out whether there would be changes in the students' achievement as a result of treatments. The researcher supervised the administration of the EWTSSS with the assistance of the participating teachers to ensure cooperation and similarity of test conditions.

In addition, the following precautions were taken in the course of experiment:

- i. Attendance was taken at the beginning of every teaching session so that scores of students who missed any of the sessions would not be used during data analysis,
- ii. The two groups were taught the same topics but with different methods,
- iii. To prevent students from getting familiar with the test items of the pre-test and post-test, question papers were collected from students after pre-test and rearranged during post-test.
- iv. Time allowed for pre-test and post-test was the same

At the end, data obtained from pre-test and post-test of both groups were analysed.

Results

Hypothesis one: There is no significant main effect of Treatment (Concept Mapping Strategy and Conventional instruction method) on Students' achievement in English Essay Writing.

Table 1: Summary of Analysis of Covariance (ANCOVA) of Students' achievement in English Essay Writing by Treatment (Concept Mapping Strategy and Conventional instruction method) and Gender

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2118.585 ^a	4	529.646	8.974	.000	.307
Intercept	1697.500	1	1697.500	28.762	.000	.262
Pre-test	61.653	1	61.653	1.045	.310	.013
Treatment	650.805	1	650.805	11.027	.001	.320
Gender	51.550	1	51.550	.873	.353	.011
Treatment * Gender	100.702	1	100.702	1.706	.195	.021
Error	4780.450	81	59.018			
Total	60001.000	86				
Corrected Total	6899.035	85				

a. R Squared = .307 (Adjusted R Squared = .273), F(1,81)= 11.027, P < 0.05

Table 1 shows the summary of Analysis of Covariance (ANCOVA) of students' post-test achievement in English essay writing by treatment (Concept Mapping Strategy and Conventional instruction method) and Gender. The table reveals that after adjusting for the covariance, (pre- test score in English essay writing), the effect of treatment on students' achievement in English essay writing was statistically significant, $F_{(1, 81)} = 11.027$, $p < 0.05$. Consequently, the null Hypothesis which states that there is no significant main effect of Treatment on students' achievement in English essay writing is therefore rejected. The table further shows that the Partial Eta Square (η^2) was 0.320, which was considered to be moderate effect size according to Otor, (2013). The simple implication of this is that 32% of the variance experienced in students' achievement in English essay writing was accounted for by the treatment. In order to determine which group differs significantly among the two groups, Sidak Post-hoc analysis was done. The results are presented in Tables 2 and 3 below.

Table 2: Sidak post-hoc Analysis of students' achievement in English essay writing by treatment

Treatments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental group	28.218 ^a	1.449	25.335	31.102
Control Group	19.963 ^a	1.593	16.793	23.133

a. Covariates appearing in the model are evaluated at the following values: Pre-test = 19.16.

Table 3: Comparison

(I) Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Experimental Group	Control Group	8.255*	2.486	.001	3.309	13.202
Control Group	Experimental group	-8.255*	2.486	.001	-13.202	-3.309

Based on estimated marginal means, *. The mean difference is significant at the .05 level.

Table 2 further revealed that Experimental Group (Concept Mapping Strategy) has the highest mean score of (\bar{X} = 28.218) while the Control Group (Lecture Method) has the least mean score of (\bar{X} = 19.963). Table 3 confirmed that the difference between the Experimental group (Concept Mapping Strategy) and the Control Group was statistically significant.

H₀₂: There is no significant main effect of gender on Students’ achievement in English Essay Writing.

Analysis of the result from table 1 revealed that there was no significant main effect of gender on Students’ achievement in English essay writing $F_{(1,81)} = .873, p > 0.05$. Thus, the stated null hypothesis that there is no significant main effect of Gender on students’ achievement in English essay writing is therefore not rejected. The pairwise comparisons of the mean scores also show a mean difference of 1.718 between male participants and their female counterparts; the mean difference is not statistical significant.

Table 4: Estimated Marginal Means of students’ achievement in English essay writing by gender

Participant Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	23.232 ^a	1.400	20.447	26.016
Female	24.950 ^a	1.131	22.699	27.200

a. Covariates appearing in the model are evaluated at the following values: Pre-test = 19.16.

H₀₃: There is no significant interaction effect of treatment and gender on students’ achievement in English Essay Writing

From table 1, it was revealed that the interaction effect of Treatment and gender on students’ achievement in English essay writing was not statistically significant at $F_{(1, 81)} = 1.706, p > 0.05$. The null hypothesis which states that there is no interaction effect of treatment and gender on students’ achievement in English essay writing was therefore not rejected. The partial Eta square (η^2) = .021, a confirmation of a very low effect size.

Discussion

Effect of Treatments (Concept Mapping Strategy and Conventional Method) on the Achievement scores of students in English Essay Writing

The finding for the Hypothesis One shows that the mean score of students who were taught essay writing using concept mapping was higher than the mean score of students taught English essay writing with Conventional method (Lecture Method). This is an indication that concept mapping as a method of teaching could have some influence in remedying students' underachievement in essay writing at secondary school level. This agrees with Nada (2008) who equally found that students improved on their performance in English language when teachers used concept mapping strategy in secondary schools in Palestine. The finding also agreed with previous studies of Mukulu et al, (2006) and Beydarani (2015) who both discovered that concept mapping strategy, when adequately used by teachers will enhance better achievement among students of both sexes. Ong'ondo (2011) also noticed the efficacy of concept mapping in teaching writing skills among English as foreign language learners.

This finding also corroborates Khajavi and Katabi (2012) who indicated that innovative teaching method like concept mapping could be used to improve students' achievement in essay writing to reposition education in Nigeria through competitiveness, innovation and entrepreneurship.

Effect of Gender on Students' Achievement in English essay writing when taught using Concept Mapping Strategy

The finding of this study agrees with hypothesis two which states that there is no significant difference in the post-test mean achievement scores of male and female students taught essay writing using Concept Mapping Strategy. It agrees with Khajavi and Ketabi (2012) who discovered that gender did not have any significant effect on the achievement of Senior School students taught Literature in English using Concept Mapping Strategy. This finding also corroborates what Graham and Perin (2007) discovered in their findings that gender does not influence students' achievement in English with the use Concept Mapping Strategy. This finding also supports Muodumooncgu and Unwaha (2013) who opined that the use of Concept Mapping Strategy improves students' learning outcomes without any gender bias. Beydarani, (2015) therefore encouraged language teachers to adopt using Concept Mapping Strategy in their English essay writing classroom interactions to enhance students' better achievement that facilitates competitiveness, innovation and entrepreneurship to reposition education in Nigeria.

Effect of Treatment and Gender on Students' Achievement in English essay writing when taught using Concept Mapping Strategy

The finding of this study agrees with Hyland, (2003) and Negari, (2011) who discovered that treatment and gender did not have significant effect on the mean achievement of students in English language. This further supports the findings of Awofala (2011) who found out that treatment and gender did not influence junior school students' achievement in Mathematics. This finding is similar to Singh and Moono (2015) who compared concept mapping and traditional teaching methods in the teaching of Chemistry and discovered that treatment and gender did not have effect on students' achievement. It also corroborates Sultan (2014) who explored the efficacy of the use of

concept mapping in English language achievement and attitude among secondary school students in Iraqi and also discovered that treatment and gender had no effect on students' achievement. This therefore supports the null hypothesis three which states that there is no significant effect of treatment and gender on students' achievement in English essay writing to reposition education in Nigeria through competitiveness, innovation and entrepreneurship.

Recommendations

In view of the findings and its implications, the following recommendations are therefore made:

1. Students should endeavour to identify their areas of difficulties in English essay writing and embrace learning English essay writing as language teachers employ Concept Mapping Strategy as a medium of classroom interaction to reposition education in Nigeria through competitiveness, innovation and entrepreneurship.
2. Students, irrespective of their gender, should be encouraged to develop the spirit of competitiveness, innovation and entrepreneurship to re-position education in Nigeria. In other words, gender stereotyping should be eliminated in the classroom.
3. Teachers should be encouraged to employ concept mapping strategy in teaching essay writing skills to students in secondary schools to enhance better achievement in English language so as to re-position education in Nigeria through competitiveness, innovation and entrepreneurship.

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