EFFECTS OF CORPORATE PROBLEM-SOLVING APPROACH ON ECONOMICS STUDENTS' FINANCIAL AUTONOMY AND ACADEMIC ACHIEVEMENT IN COLLEGE OF EDUCATION, GIDAN-WAYA, KADUNA STATE, NIGERIA

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Abstract

The study determined the Effects of Corporate Problem-Solving Approach (CPA) on Economics Students' Financial Autonomy and Academic Achievement in College of Education, Gidan-Waya, Kaduna State, Nigeria. Two research questions, two null hypotheses were formulated. A quasi-experimental pre-test, post-test, non-equivalent control group design was formulated for the study. A sample of 75 economics II students' combinations by simple random sampling techniques from six departments were used for the study. Two intact departments were randomly selected and assigned experimental and control groups respectively. The experiment and control groups were taught the corporate problem-solving approach (velocity of money) by the trained economics research assistants. The instruments, financial autonomy investment strategy - pre-test and post-test were developed, duly validated and reliability 0f equivalence, internal consistency and stability duly established (0.89 and 0.84 respectively) before using them for data collection. The research questions were answered using mean and standard deviation while the hypotheses were tested at ($p < 0.05$) using analysis of covariance (ANCOVA). The result of data analysis showed that there is a significant difference between the experimental and control group, with the mean students' financial autonomy scores of the CPA group being significant more than the control group; there was also a significant difference in the mean scores of economics students' academic achievement when CPA was used. A major educational implication of the findings is that the use of CPA showed a significant difference in the students' financial autonomy and academic achievement of economics students, thus the use of CPA will not only help reduce the problem of students' dropout due to academic finance related problem, but will also encourage students' financial autonomy and improve the academic achievement of students in economics among others.

Keywords: Economics, Corporate Problem-Solving Approach, Students' Financial Autonomy, Academic Achievement

Introduction

Education all over the world is seen as the corner stone of development and the major social service which the government of any nation, communities, parents, and organizations give to their people. It plays a critical role in shaping the individual's mind, character and ability, enabling them to contribute meaningfully to the growth and development of themselves, communities and nation at large. At a global concept, education is the deliberate, systematic process through which individuals acquire knowledge, skills, values, attitudes and habits to aid their personal and societal development (UNESCO, 2022). It is essential for the development of the individual to contribute meaningfully to quality economy and self-sustenance.

Economics reveals how individuals, businesses, and governments allocate scarce resources to satisfy competing needs and wants. It is a discipline that promotes critical thinking and problem-solving skills, making it a vital field in understanding and addressing real-world economic challenges. As a subject, it equips students with theoretical knowledge and practical tools to analyze issues such as resource allocation, financial management, and market dynamics (Lipsey& Chrystal, 2020). Studying Economics is crucial because it prepares students and impart essential life skills for contributing to national development and financial autonomy. The inculcation of Economics into the National Certificate for Education (NCE) system in 1966 brought so much hope and enthusiasm to students, business organizations and the government. The adverse effect of unemployment necessitated the introduction of Economics in the Nigerian school curriculum aimed at inculcating the students with critical thinking skills which in the long run will reduce the rising unemployment rate when they are able to utilize the knowledge gained to be self-reliance.

Economics, as a discipline, requires students to understand and analyze resource allocation, financial management, and decision-making processes. However, the absence of practical learning frameworks has limited Economics students' ability to achieve financial independence and academic achievement. These seems to have failed as the economy presently is continually dwindling, unemployment and social vices at the increase raising scholarly concern about the nature of the Economics curriculum in play, its implementation and importance in national development. This also underscores the need for innovative educational strategies that equip students to be self-reliant and competitive in the business cycle.

The National Certificate in Education (NCE) is the foundational teacher-training qualification in Nigeria. Economics as a course in the NCE programme is designed with multiple educational and societal goals of producing competent teachers who possess deep knowledge of economic theory and its applications and are prepared to teach Economics at the basic education levels and demonstrate financial dominance in the economy. It also equipped future teachers with adequate professional teaching skills including the ability to organize and present Economics lessons effectively and who are ready to pursue further studies in Economics to develop critical thinking and analytical skills that enable students to understand and analyze economic problems and real-world issues. Morris, Covin and Kuratko (2021) affirmed that Economics provide students with economic skills applicable to daily life, including decision-making and resource-allocation skills that enables them to contribute to societal and national development. Economics knowledge enables the graduate to understand economic systems and participate meaningfully in economic growth. Morris emphasized that Economics liberate students intellectually, empowering them to tackle community and individual economic challenges with logic and optimism rather than superstition or ignorance. The NCE Economics curriculum trains educators who are capable of teaching Economics effectively at lower levels, fosters corporate critical thinking, and empowers students with economic reasoning and practical life skills relevant to the Nigerian socio-economic context, (Azi &Drenkat, 2021).

Corporate Problem-solving approach as a pedagogy helps students to identify, analyze, and address challenges or obstacles to achieving specific goals or outcomes. This approach could widely be used in various fields, including education, business, healthcare, and entrepreneurship, to foster critical thinking, creativity, and effective decision-making. Fayolle and Gailly (2018) suggested that the first step involves in problem-solving approach is recognizing and clearly defining the problem. A well-defined problem is crucial to finding an appropriate solution. In education, students have to identify challenges in understanding specific concepts or subjects or factors impeding their academic achievements. The corporate problem-solving approach adapts real-world organizational problem-solving processes into classroom teaching instead of traditional lecture-teaching method. Here, students are treated like “corporate teams” who analyze problems, brainstorm solutions, take decisions, and evaluate outcomes to build practical skills, confidence for financial independence. Corporate problem-solving approach works in teaching where learning starts with a real problem similar to what firms face such as how can an Economic student generate revenue? Why do small businesses fail? How can resources be allocated efficiently? Why do students lack saving habits? How can money continue circulating instead of laying idle? Then Students are divided into small “corporate teams” for problem definition, data gathering, brainstorming options, cost–benefit analysis, risk analysis, and decision making. This process builds critical thinking, analytical skills, team collaboration and leadership skills.

Financial autonomy reflects individual’s ability to generate and manage their own income without depending on external sources. For NCE students, achieving financial autonomy often entails balancing academic responsibilities with income-generating activities. This is especially relevant where many students face financial challenges due to limited institutional supports (Umar &Saidu, 2020). Corporate financial education offers a practical pathway to financial autonomy. By equipping students with entrepreneurial skills such as identifying market opportunities, managing resources, and creating innovative solutions, students can establish small-scale businesses or ventures that provide a sustainable income while studying (Gailly, 2018). These skills are particularly beneficial for economics students, as they align with the principles of financial management, opportunity cost, and resource allocation taught in their curriculum. The relevance of financial autonomy extends beyond personal economic empowerment. Students who achieve financial independence are more likely to develop confidence, resilience, and problem-solving abilities, which positively impact their overall development. For economics students, these qualities are vital for understanding how to navigating the complexities of economic systems and policies and achieve success in their academics.

Academic achievement considers the successful attainment of educational objectives, often measured through grades, research output, and other performance metrics. Economics achievement at the NCE levels vary widely and are influenced by preparation at the secondary schools' level, teaching quality, instructional resources, and students' quantitative skills which provides the academic foundation for NCE entrants. Zamon (2018) clarified that moderate performance at College of Education, Gidan Waya shows fluctuating trends, suggesting that many students do enter the school with mixed academic readiness with some identifiable factors responsible for lower performance to include poor quantitative skill preparation, teaching pedagogy and quality, background knowledge of mathematics and financial constraintslikely impacting negatively the NCE Economics achievement. Economics students can enhance academic achievement by integrating experiential learning with traditional academic curricula that fosters critical thinking, creativity, and decision-making skills. These are directly transferable to academic tasks and involving students in real-world projects and business simulations bridging the gap between theory and practice, making academic concepts more relatable and easier to understand.

Attempts have been made to improve students' financial autonomy and achievement through the use of other teaching approaches, strategies and techniques such as inquiry, collaborative strategies, field trip, projects, simulations among others, but little have such strategies yielded significant results in improving the financial autonomy and achievement of students in NCE Economics Students. The pertinent question yet to be answered is, does corporate problem-solving approach affects Economics students' financial autonomy and academic achievement in Colleges of Education in Nigeria? It is in a quest to provide answer to this question that, this study seeks to find out the effects of corporate problem-solving approach on Economics students' financial autonomy and academic achievement in College of Education, Gidan-Waya, Kaduna State, Nigeria.

Objectives of the Study

The aim of this study is to examine the Effects of Corporate Problem-Solving Approach on Economics Students' Financial Autonomy and Academic Achievement in College of Education, Gidan-Waya, Kaduna State. Specifically, the objectives of the study are to:

1. determine the effects of corporate problem-solving approach on financial Autonomy mean scores of Economics students in College of Education, Gidan Waya, Kaduna state
2. examine the effects of the corporate problem-solving approach on academic achievement mean scores of Economics students in the experimental groups.

Research Questions

The following research questions were raised to guide the study:

1. what are the pre-test and post-test financial autonomy mean scores of Economics students in the experiment and control groups?
2. what are the pre-test and post-test academic achievement mean scores of Economics students in the experimental and control group?

Hypotheses

The following hypotheses were formulated and tested at a 0.05 level of significance.

1. There is no significant difference in the pre-test and post-test financial autonomy mean scores of NCE Economics students in the experimental and control groups.
2. There is no significant difference in the pre-test and post-test academic achievement mean scores of NCE Economics students in the experimental and control groups.

Methodology

The study adopted a quasi-experimental research design, specifically the non-equivalent pre-test and post-test design, to examine the effect of the Corporate Problem-Solving Approach (CPA) on students' financial autonomy and academic achievement. The design was considered appropriate because random assignment of participants was not feasible in the natural school setting, while still allowing the researcher to determine the cause-and-effect relationship between the treatment and the outcomes. Participants were grouped into experimental and control groups, where the experimental group received CPA treatment while the control group did not.

The population of the study comprised all NCE II students offering Economics combinations in Kaduna State College of Education, Gidan Waya. Two departments were selected for the study through simple random sampling technique. Department A with 39 students served as the experimental group, while Department B with 36 students served as the control group, giving a total sample size of 75 students. Balloting method was used to assign the departments into experimental and control groups, while intact classes were maintained for the study. Two instruments developed, the Financial Autonomous Investment Test (FAIT) and Economics Achievement Test (EAT) were used for data collection. The instruments were validated by experts and Reliability coefficients of 0.98 for FAIT and 0.94 for EAT were obtained, indicating that the instruments were reliable.

The treatment lasted for eight weeks. Students in the experimental group were provided with a token sum of ₦100,000 for Economics practical activities and were required to submit weekly financial reports on selected business activities, while the control group sourced funds independently without intervention. Data collected were analyzed using descriptive and inferential statistics with the aid of SPSS version 27.0. Mean and standard deviation were used to answer the research questions, while Analysis of Covariance (ANCOVA) was employed to test the null hypotheses at 0.05 level of significance.

Research Question One: What are the effects of corporate problem-solving approach pre-test and post-test financial autonomy mean scores of NCE II Economics students in the experimental and control groups?

Table 1

Pre-test and post-test financial autonomy mean scores of NCE II Economics students in the experimental and control groups

Group	Pre-test			Post-test			
	N	Mean	SD	Mean Difference	SD	Mean Gain	Mean
Experimental	39	26.56	8.52	63.95	15.05	37.39	32.06
Control	36	31.36	7.39	36.69	5.89	5.33	

Table 1 shows the pre-test and post-test financial autonomy mean scores of NCE II Economics students in the experimental and control groups. The experimental group which comprised of 39 students had a financial autonomy mean score of 26.56 with a standard deviation score of 8.52. After the intervention, the mean post-test of the experimental group increasedto 63.95 with a standard deviation of15.05 indicating more variability in scores. The mean gain for this group was 37.39. In contrast, the control group with 36 students had a lower mean score of 31.36 with a higher standard deviation of 7.39 suggesting greater spread in their initial scores. indicates that there was a higher increase in the financial autonomy mean score of students after treatment using the corporate problem-solving approach over those in the control group. The two mean difference was 32.06 in favour of the posttest. This indicated that the corporate problem-solving approach does increases students' financial autonomy in Economics more than the conventional method.

Hypothesis One

There is no significant difference in the effects of corporate problem-solving approach pre-test and post-test financial autonomy mean scores of NCE II Economics students in the experimental and control groups

Table 2

Summary of ANCOVA result on the There is no significant difference in thepre-test and post-test financial autonomy mean scores of NCE II Economics students in the experimental and control groups.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Ela Squared
Corrected Model	14874.759	2	7437.380	60.467	.000	.627
Intercept	7152.904	1	7152.904	58.154	.000	.447
GROUPS	10767.238	1	10767.238	87.539	.000	.549
FIN. AUTONOMY	969.629	1	969.629	47.883	.000	.099
Error	8855.907	72	122.999			
Total	217787.000	75				
Corrected Total	23730.667	74				

a. R Squared = .627 (Adjusted R Squared = .616

Table 2 shows the pre-test and post-test financial autonomy mean scores of students in Economics in the experimental and control groups. The Experimental group had a financial autonomy mean score of 26.56 with a standard deviation score of 8.52. In the post-test, the experimental group had a mean difference of 63.95 and a standard difference of 15.05 with a mean gain of 37.39. The control group had a mean score of 31.36 with a standard deviation of 7.39 in the pre-test and a mean score of 36.69 with a standard deviation of 5.89 at the post-test, with a mean gain of 5.33. This means that there was a higher increase in the financial autonomy mean score of students after treatment using the corporate problem-solving approach. The mean difference was 32.06 in favour of the posttest. This indicated that the corporate problem-solving approach does increases students' financial autonomy in Economics more than the conventional method.

Research Question Two: What are the effects of corporate problem-solving approach pre-test and post-test achievement mean scores of NCE II Economics studentsin the experimental and control group?

Table 3
Pre-test and post-test achievement mean scores of NCE II Economics students in the experimental and control group

Group	Pre-test			Post-test			
	N	Mean	SD	Mean Difference	SD	Mean Gain	Mean
Experimental	39	41.95	11.29	65.82	12.58	29.37	29.15
Control	36	44.86	11.13	45.03	7.55	0.22	

Data in table 3 shows the pre-test and post-test achievement mean scores of NCE II Economics students in the experimental and control group. In the Experimental group, which comprised of 39 students had an achievement mean score of 41.95 with a standard deviation of 11.29 in the pre-test. After the intervention, their mean score increased to 65.82 with a higher standard deviation of 12.58 in the post-test, and a mean gain of 29.37. In contrast, the control group comprising of 36 students, had a lower mean score of 44.86 with a lower standard deviation of 11.13 in the pre-test and a mean score of 45.03 with a lower standard deviation of 7.55 at the post-test, with a mean gain of 0.22. Comparing the two groups, there was a higher increase in the achievement mean score of students after treatment using the corporate problem-solving approach with a mean difference was 29.15. The gain of 0.22 indicates that the lecturing approach does not increase students' achievement as in corporate problem-solving approach in Economics.

Hypothesis Two

There is no significant difference in the effects of corporate problem-solving approach pre-test and post-test achievement mean scores of NCE II Economics students in the experimental and control groups.

Table 4
Summary of ANCOVA result on the pre-test and post-test achievement mean scores of NCE II Economics students in the experimental and control groups.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Ela Squared

Corrected Model	9829.128[a]	2	4914.564	56.355	.000	.610
Intercept	6098.374	1	6098.374	69.929	.000	.493
GROUPS	8954.924	1	8954.924	102.685	.000	.588
ACHIEVEMENT	1735.764	1	1735.764	19.904	.000	.217
Error	6278.952	72	87.208			
Total	249966.000	75				
Corrected Total	16108.080	74				

a. R Squared = .610 (Adjusted R Squared = .599)

Data in table 4 indicates that F-Value (1,72) = 102.69 P-value =000 which is less than 0.5 level of significance. The null hypothesis has been rejected and is concluded that there is significant difference between the post-test Economics achievement mean scores of male and female Economics students taught using corporate problem-solving approach. The result further shows an adjusted R squared value of .610 which means that 61% of the variation in the dependent variable which is achievement is explained by variation in the various groups, while the remaining 39% is due to treatment and other factors not included in this study. The very high partial eta squared value indicated in the various groups explained more than 50% of the variance in posttest achievement, this implies that improvements in students' achievement is largely influenced by the variance in teaching methods rather than their depending on the traditional methods of teaching and learning. This implies that corporate problem-solving approach can help improve the achievement of students in Economics without group difference.

Discussion

The result of data analysis on table 1 shows that students taught with FAIS approach are significantly better in the Economics Students' financial autonomy and academic achievement test than their counterparts who were taught using the lecture method. These results are in agreement with the result of earlier studies carried out by Alade&Olagunju (2016), Rauch &Hulsink (2016) and Yazeed (2016) who found in their separate studies, that learning activity package FAIS was more effective than the conventional lecture methods in fostering students' financial autonomy and academic achievement.

The relative superiority of the FAIS over the lecture method in enhancing students' financial autonomy could be attributed to the fact that, as a teaching method the FAIS is student-centered and ensures active participation of students in the teaching learning process more than the lecture method. The lecture method often subjects the learner to the position of the passive recipient of the facts as handed down to him by the teacher without first hand proof. Moreover, the activities in the FAIS were carried out by the students themselves, at their own pace during and after the school periods; which is in contrast to the lecture method where the teacher did most of the work for the students. The active participation of the students involving interacting with one another, invariably arouse greater students' financial autonomy interest going by the Social Constructivism Theory, Human Capital theory and the theory of Innovation [Lev Vygotsky (1978), Becker (1964) & Schumpeter (1911) respectively]. Given, these prevailing circumstances under which the FAIS and the lecture method are employed in the classroom instruction, it is no surprising that the treatment group out - achieved the control group in students' financial autonomy.

Furthermore, above result on table 2 on the effect of FAIS on students' academic achievement also completely agreed with Lev Vygotsky (1978) who found that corporate method of learning enhances academic achievement better than the lecture method employed in the learning process. Although the effectiveness of the corporate learning method may be due to the nature of the subject matter, which Economics as a course requires unified effort for effective understanding of some Economics concepts.

Conclusion

TheLearning package, Financial Autonomy Investment Strategy (FAIS) was found to be more effective than the lecture method of Economics students' financial autonomy. While the mean performance score of the experimental students was found to be slightly greater than their control group counterpart using Corporate Problem-Solving Approach (CPA), there was a significant difference in the extent of academic achievement of Economics concepts between the treatment and control groups. Also, the experimental student' mean achievement scores were significantly greater than that of the control group students. There is no significant interaction effect of treatment and gender on students' mean financial autonomy and academic achievement scores. Student' ability levels and treatment had significant interaction effect on their financial autonomy in the academic concepts taught.

Recommendations

In view of the afore-mentioned educational implications of the result of this study, the following recommendations were made:

1. The learning approach has been found effective in promoting Economics students' financial autonomy and academic achievement in colleges of education. Since this teaching method is relatively new in Nigeria, it should be included in the Economics curriculum of the NCE programme so as to popularize its use among the lecturers and hence bring about more effective learning process.
2. Seminars and workshops should be organized by government and relevant professional bodies in Economics to educate and sensitize lecturers on the use of the corporate problem -solving approach in teaching and learning Economics.

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