



Effect of think-pair-share technique on academic performance of office practice students in colleges of education Kwara state

Lawrence F. Ademiluyi¹
Afiss Adebayo Fawale²

Abstract

The study aimed at investigating the effect of the think-pair-share technique on academic performance of students in office practice in colleges of education, Kwara state, Nigeria. One intact group was selected as the control group and the other as the experimental group at random. The study was directed by two research questions and two null hypotheses. The study used a quasi-experimental approach that included pre- and post-tests. The population of the study comprised 125 students majoring in business. The purposive sampling procedure was used in selecting 125 students who were grouped into treatment and control groups. The instruments for data collection were programmed material (modules) for office practice and Office Practice Achievement Test (OPAT) developed by the researchers based on the topic to be covered. Two hypotheses with significance levels of .05 were tested using the ANCOVA statistic technique. Both groups had 15 reading sessions; the experimental group received treatment and had their reading instruction based on the think-pair-share technique, whereas the control group received reading instruction using the traditional approach. The findings suggested that using the think-pair-share method can improve students' academic performance.

Keywords: think-pair-share technique, academic performance, office practice

Introduction

Office practice is one of the options in business education course in college of education that train students in the day-to-day clerical and administrative activities performed by office professionals to support work-related functions and organizational decision makers. The students are trained in two areas, namely teaching and office administration. As part of the curriculum, students are expected to do teaching practice as well as industrial training so as to get acquainted with these two major roles as business educator.

The rate of failure and lack of prerequisite skills among office practice students in recent times is disturbing. It points to the fact that the students have not gained sufficient skills from the courses they have been offered. Many of them cannot type without looking at the keep board, nor can they use computer systems independently. Apart from the lack of computer skills and failure in speed and accuracy, many of the students find it difficult to use shorthand. This scenario has become a serious concern to stakeholders and everyone is searching for the possible course of this challenge.

The essence of every instructional activity is to bring about certain desirable changes in the learner. For office practice education, acquisition of office management/organization skill, proficiency in shorthand, business communication skills and technological skills constitute the hallmark of student's achievement. It is only if and if only the office practice students acquire and demonstrate the mastery of these skills that he/she can be said to have achieved. The researcher holds tenaciously to the view that office practice students have not performed or achieved very well if they do not demonstrate the mastery of these skills.

Academic performance is the completion of specific work that is evaluated against specified standards of accuracy, completeness, cost, and speed. It also refers to the academic activity of studying and how effectively students adhere to the criteria established by the relevant authorities. A variety of factors, such as the subject matter to be taught, the teacher's goals and the resources available for learning, the teacher's skills and willingness to improvise in the absence of traditional teaching aids, education and follow-up activities, and the individual learning styles of each student, influence the choice of a particular teaching method.

One technique for cooperative conversations that encourages students to work in groups is think-pair-share (TPS). At the University of Maryland, Frank Lyman (1987) developed the strategy in 1985. In order to develop students' capacity for independent thinking, the technique encourages learners to learn individually, collaborate in groups, and present. To develop students' capacity for independent thinking, it promotes autonomous learning, group collaboration, and presentation skills. The think-pair-share technique is frequently used in schools to engage learners in debates and activities and get them thinking. It is also used to encourage conversation improvement which can be modified to concentrate on learning and the requirements of specific student groups. It can also be used in corporate organizations during meetings and brainstorming sessions. The three stages of the "think-pair-share" technique are "thinking," "pairing," and "sharing." Students then pair up with their peers to share answers to the question and pinpoint which answer is right. Lastly, the pairs take turns sharing these answers with the rest of the group (Muraina et al., 2021). Additionally, it is employed to promote dialogue enhancement, which may be tailored to concentrate on learning and the requirements of specific student groups.

1 PhD, Department of Business and Entrepreneurship Education, Faculty of Education, Kwara State University, Malete, Nigeria

2 Department of Educational Management and Counselling, Faculty of Education, Al-Hikmah University, Ilorin, Nigeria



Ni'mah and Dwijananti (2014) describe think-pair-share as a cooperative learning strategy with an experimental approach that can enhance student learning activities and outcomes. Ikhtiarfan (2016) refers to think-pair-share technique as a simple cooperative learning method. Surayya et al. (2014) affirm that the TPS technique is an alternative learning technique to improve science learning outcome. Hetika et al. (2017) claim that students who learn using the think-pair-share technique learn more efficiently than students who learn using the traditional learning technique. This method involves the instructor asking a question to the class, preferably one that requires analysis, synthesis, or evaluation, and giving them about a minute to come up with a suitable response (Lyman, 1987; Muraina et al., 2021). Usman (2015) asserts that students gain throughout the teaching and learning process might express thoughts that come to them as answers to the instructor's questions. Then, after sharing their response with others, students turn to other fellow students.

According to Muraina and Oladimeji (2022), think-pair-share technique works in all class sizes and grade levels because it promotes student participation. They claim that there are three basic steps students use to consider questions: Thinking comes first. Students reflect on the given question on their own, coming up with original thoughts. Pairing is the second step. After being paired up, students discuss and refine their ideas in groups of two. Students can express their opinions and think about others at this step. Sharing comes third. When speaking to a larger audience, such as the entire class, students pair-share their ideas. Students find it easier to propose ideas to a group when they have a companion to lean on. Additionally, the ideas of students have expanded.

In order to prepare students for jobs and self-employment in the office administration sector, the office practice course aims to provide them with relevant information, employable skills, and applicable competences. All industries, including those in the formal and unofficial commercial sectors and the non-commercial sector, require the use of administrative competences (Muraina et al., 2021). Office practice concurrently develops cognitive skills and offers the core knowledge needed for entry into careers in business and administration as well as associated studies at the further and higher education level with increased employment chances.

As for academic achievement, it, according to Leonardi (2021), refers to the results of a test administered to students who take part in an experimental study. Poor academic performance in the office education field, according to Arepo (2015), can be linked to a number of issues, the main one of which is the teaching methods applied by the instructors. This suggests that without the availability and effective utilization of instructional materials, a student's understanding of business education topics may not be fully attained. According to Fawale, (2022) poor academic performance may be caused by a variety of issues, including the government's attitude toward some secondary school business education subjects, a shortage of business education teachers, societal perceptions of the program, poor teaching techniques used by some teachers, and poor reading habits on the part of some students.

Statement of the problem

According to Ademiluyi (2016), office education students are finding it more and more difficult to complete office education courses in colleges of education, particularly those involving shorthand, office practice, and word processing. Business school lecturers have incorporated a number of tactics and ways to raise the bar for students' academic performance. Students find it challenging to advance in their skills because of their subpar academic achievement in office education (Muraina & Oladimeji, 2022). Most of these students, whose aspiration is to work as professional secretaries, have grown disinterested in the course and are now looking for enrolment to other programs. Similar to this, inadequate office education knowledge and skills may prevent business education students from starting small businesses, managing them successfully, and becoming successful secretaries after graduation. This prevents the achievement of the goals of business education and raises the unemployment rate among education graduates. Students' low academic performance in office education may be caused by a variety of causes (Muraina & Oladimeji, 2022). It might be related to a dearth of trained teachers, a lack of drive, poor instructional materials, etc. This study focuses on the fact that office education students in Kwara state's colleges of education are underperforming in their coursework, which prevents them from finding employment or continuing their education. Therefore, the study was conducted to see whether using the TPS instructional technique when teaching office practice could enhance students' academic progress.

Purposes of the study

1. To determine the treatment effect of think-pair-share teaching technique on academic performance of office practice students in colleges of education.
2. To determine the effect of gender on academic performance of office practice students.

Research questions

In this study, answers were sought to the following research questions:

1. What is the effect of think-pair-share on the academic performance of office practice students in colleges of education?
2. What is the effect of gender on academic performance of office practice students?



Research Hypotheses

The following research hypotheses were tested at 0.05 significance levels in this study:

Ho1: here is no significant difference between the pre-test and post-test performance mean scores of office practice students using think-pair-share and those taught using discussion method in colleges of education.

Ho2: There is no significant main interactive effect of gender and think-pair-share on the academic performance of office practice students.

Methodology

This study adopted quasi-experimental design which involved experimental and control groups where pre-test and post-test was conducted.

The following abbreviations are used below:

EG - Experimental Group

CG - Control Group

X₁ -Treatment (think-pair-share)

X₂ - Treatment (traditional method)

O₁ - Pre-test

O₂ -Post-test

Whereas O₁ represents the pre-test conducted with the experimental groups (EGs) and control groups (CGs), respectively, O₂ represents the post-test conducted with experimental/treatment and control groups, respectively, and X₁ represents the treatment to the experimental group (TPS), while X₂ the traditional method applied to the control group CG, respectively.

The population of the study consisted of all second year office education students in two Colleges of Education in Kwara state in 2020/2021 academic year, whose total number was 125. Specifically, two colleges provided the sample for the study selected from the colleges of education in the state. Selection was done using a purposive sampling technique based on the institutions that offer education in business, that have a sufficient number of students, qualified lecturers and relevant facilities. The students were allocated to the control and experimental groups using randomization procedures. The major instrument for data collection was programmed material (modules) for office practice which was divided into six weeks, and Office Practice Achievement Test (OPAT) developed by the researcher based on the topics to be covered. The test included 40 objective (closed-ended) items with four options A, B, C, and D. Each correct option yielded a score of 1 point. The OPAT duration was 20 minutes. Curriculum Content and Test Content was used and r values 0.83 was obtained. Split half method was used after administering the instrument to students that were not part of the sample and r values 0.83 was obtained. This demonstrated that the instrument is trustworthy. At the 0.05 level of significance, all hypotheses were tested, using the inferential statistics of Analysis of Covariance (ANCOVA) in other to assess the research hypotheses.

Results

Research question one: what is the effect of think-pair-share on academic performance of office practice students in colleges of education?

Table 1. Mean achievement scores of the effect of think-pair-share techniques on academic performance of office practice students

Groups	N	Pre-test \bar{X}_1	Post-test \bar{X}_2	Mean difference \bar{X}_D
Experimental (TPS)	32	19.3438	28.9375	9.5937
Control	93	20.7957	22.9892	2.1935
Total	125			



The mean post-test achievement scores increased, as shown in Table 1, with the mean difference between the think-pair-share technique and control group being 9.5937 as opposed to 2.1935. The post-test mean achievement scores of students who received office practice using the think-pair-share technique demonstrate that the teaching strategies were successful in enhancing student learning. The mean score for the think-pair-share technique group of students was greater than the mean score for the control group ($x = 22.9892$). This implies that treatment has significant mean effects on students' achievement in office practice. The result suggested that the treatment had effectiveness in favour of students exposed to TPS.

Research question two: What is the effect of gender on academic performance of office practice students using think-pair-share techniques in colleges of education?

Table 2: Means and standard deviation of pre-test and post-test mean scores on gender

Source	Sex	N	Mean	Std. Deviation
Pre-test	Male	17	17.5882	3.42890
	Female	15	21.3333	4.06495
	Total	32	19.3438	4.13958
Post-test	Male	17	29.8824	3.95099
	Female	15	27.8667	4.12080
	Total	32	28.9375	4.09514

Table 2 shows the mean pre-test and post-test scores of male and female students exposed to the TPS technique. It shows that at pre-test, the mean score for male students assigned to receive the technique was 20.9008 and standard deviation was 5.05042 compared to female students whose mean score was 21.1260 and standard deviation of 5.37778. After intervention, the mean score for male students increased to 27.3058, with a standard deviation of 4.81637, while the mean score of the female students also increased to 26.1732 with a standard deviation of 5.26056. This outcome suggested that the treatment had effectiveness for both male and female students.

Testing of Hypotheses

Hypothesis 1: There is no significant difference between the pre-test and post-test performance mean scores of office practice students using think-pair-share and those taught using discussion in colleges of education.

Table 3. ANCOVA summary of the difference between the discussion and think-pair-share technique on students' achievement scores in office practice

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2772.342a	2	1386.171	133.066	.000	
Intercept	867.351	1	867.351	83.262	.000	
Pre-test	1929.974	1	1929.974	185.269	.000	
Treatment	1167.025	1	1167.029	112.031	.000	
Error	1270.890	122	10.417			
Total	79148.000	125				
Corrected Total	4043.232	124				

Table 3 shows a one-way Analysis of Covariance conducted to test the effectiveness of think-pair-share technique to improve students' academic performance against the traditional method applied in the untreated control group. The covariate used in the analysis was the pre-test score of both the treatment and control groups. After adjusting for the covariate, the finding reveals that there was a significant effect of think-pair-share technique on students when compared to the control group on post-test scores, $F(1,122)=112.031$, $p = 0.000 < .05$. The outcome also revealed that 68.6% of variance in the post-test score can be explained by the treatment. It can, therefore, be said that to a large extent the academic performance of the students in office practice can be improved by the use of think-pair-share technique. Therefore, the null hypothesis was rejected.



Hypothesis 2: There is no significant main interactive effect of gender and think-pair-share on the academic performance of office practice students.

Table 4. ANCOVA summary on effect of interaction effect of gender and treatment on the academic achievement of office practice students

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	3666.263 ^a	2	458.283	34.562	.000
Intercept	3833.989	1	3833.989	289.144	.000
Pre-test	1465.347	1	1465.347	110.511	.000
Gender	104.667	1	104.667	7.894	.035
Group	1968.272	2	656.091	49.480	.810
Gender*group	78.724	2	28.241	.118	.225
Error	3169.092	122	13.260		
Total	183974.000	125			
Corrected Total	6835.365	124			

Male and female students who were taught business studies using think-pair-share techniques did not significantly differ in their post-test mean achievement scores, as shown in Table 4. $F(1,122)=7.894$, $p=.035<.05$). This implies that gender has no significant effect on students' academic achievement in business studies. Therefore, null hypothesis was accepted.

Discussion of findings

The results of the first research question implies that treatment has significant mean effects on the students' achievement in office practice. The result suggested that the treatment had effectiveness in favour of the students exposed to TPS. The research found that the students who were taught office practice using the think-pair-share methodology performed better on their post-test than those who were taught using the traditional discussion method. Their mean difference is also greater than that of the experimental group. This outcome is consistent with Hamdan's (2017) study in Jordan, who discovered that the learners who were instructed utilizing activities like the think-pair-share outperformed the learners who were instructed using traditional methods such as discussion. The results are also in line with those of Parker and Asare (2021) in their research conducted in Ghana, who found that the think-pair-share technique is particularly helpful in helping learners acquire skills at their own speed and that it raises academic achievement and independent learning among learners. This may be due to the experiences that the students had, which helped them to grow in knowledge and understanding and attain a better performance in office work. These results are supported by Nwaukwa and Okolocha's (2020) findings in their research in Nigeria that the think-pair-share strategy greatly enhanced students' academic performance in financial accounting.

The results of the second research question revealed that after the intervention, the mean score for both male and female students increased. This outcome suggested that the treatment was effective for both male and female students. Similarly, Akanmu (2019) found that think-pair-share technique was beneficial for students' academic achievement in mathematics, irrespective their gender. However, Nwaukwa and Okolocha's (2020) findings, as well as those by Kumar and Roshan (2006) and Hamdan (2017) revealed that not only the female students' scores in their research were higher than those of males when taught office practice using think-pair-share technique, but also the difference between the genders was statistically significant, which could be the result of the fact that females are more social and disciplined than males. The difference in the findings on the issue may be related to the subject taught, students' age, research methods, or the culture of a particular classroom.

Recently, effort had been made is exposing business education students to extensive industrial training and practical typing skills, which assisted students of both genders to be on the same page for enhanced performance in office practice. Also, Ministry of Education in Nigeria has introduced office practice to students at secondary school level which exposes students across genders to the comprehensive skills in office practice.



Conclusion

The study's findings demonstrate that think-pair sharing technique has a positive effect on students' academic performance in office practice and that if business educators can use the technique in the teaching-learning process, students will gain in-depth knowledge and effective skills which will help the business education students to demonstrate the concept for good achievement in test and examination as well as in daily practical activities.

Additionally, based on the study's findings, it is determined that the technique benefitted both male and female students, hence, they are effective for all students in instructional delivery in office practice.

Recommendations

1. Business educators need to constantly develop strategy applied during office practice by demonstrating the advantages of innovative strategies such as think-pair-share technique.
2. Since the technique favoured both genders, government and stakeholders in education should provide adequate instructional materials, gadget and facilities at the educational sectors (from primary school to tertiary level) to facilitate effective application of technique in the teaching of business education subjects.
3. Since the technique is capable of improving students' academic performance, educational stakeholders should sponsor more research on the usefulness of think-pair-share technique so as to popularize this collaborative technique.

References:

- Ademiluyi, L.F. (2016). Strategies for improving the quality of business education programmes in Nigeria Tertiary Institutions. *Osun Journal of Business Education*, 7(1), 49-60.
- Akanmu, (2019). Effects of think-pair-share on senior school students' performance in mathematics in Ilorin, Nigeria. *African Journal of Educational Studies in Mathematics and Sciences*, 15(2), 109-118.
- Arepo, I.A. (2015). *Evaluation of Business Education resources available for teaching and learning in secondary schools in Moro Local Government Area of Kwara State*. Master thesis. Malete, Nigeria: Kwara State University.
- Fawale, A.A. (2022). *Effect of collaborative m-learning techniques on academic performance of students in office practice*. Doctoral thesis. Malete, Nigeria: Kwara State University.
- Hamdan, R.K.A (2017). The effect of (think – pair – share) strategy on the achievement of third grade student in sciences in the educational district of Irbid. *Journal of Education and Practice*, 8(9), 88-95.
- Hetika, F.I. & Sari, Y.P. (2017). Think-pair-share (TPS) as method to improve student's learning motivation and learning achievement. *Dinamika Pendidikan*, 12(2), 125-135.
- Ikhtiarfan, Y. (2016). *Penerapan model pembelajaran kooperatif teknik Think Pair Share (TPS) untuk meningkatkan motivasi belajar Akuntansi pada Mata Pelajaran Dasar-Dasar Perbankan Siswa Kelas X AK 4 TA 2015/2016*. Skripsi [The application of the cooperative learning model of the Think Pair Share (TPS) technique to increase motivation to learn Accounting in the Banking Fundamentals Subject for Classes 2015/2016 academic year]. FE UNY
- Kumar, R. & Roshan, L. (2006). The role of self-efficacy and gender difference among the adolescents. *Journal of the Indian Academy of Applied Psychology*, 32(3), 249-254.
- Leonardi, J.P. (2021). Using reciprocal teaching method to improve female students' reading comprehension achievement at SMA Negeri Tujuh Prabumulih. *Holistics Journal*, 13(1), 57-97.
- Lyman, F. (1987). Think-pair-share: An expanding teaching technique. *MAA-CIE Cooperative News*, 1, 1-2.
- Muraina, K.O. & Oladimeji, L.O. (2022). Internet-based technique and social support in the management of depression among secondary school teachers in Oyo State, Nigeria. *International Journal on Education Insight (IJEI)*, 3(1), 9-18.
- Muraina, K.O., Yusuf, S. & Abdulkareem, H.B. (2021). Effects of indigenous game strategies on academic performance of pupils in numeracy in Ilorin East Local government area of Kwara state, Nigeria. *Journal of Teaching and Teacher Education*, 9(2), 71-80.
- Ni'mah, A. & Dwijananti, P. (2014). Penerapan model pembelajaran Think Pair Share (TPS) dengan metode eksperimen untuk meningkatkan Hasil Belajar dan Aktivitas Belajar Siswa Kelas VIII MTs [The application of the Think Pair Share (TPS) learning model with the experimental method to improve the Learning Outcomes and Learning Activities of students]. *Nahdlatul Muslimin Kudus. Unnes Physics Education Journal*, 3(2), 78-83.
- Nwaukwa, F.C. & Okolocha, C.C. (2020). Effect of think-pair-share instructional strategy on students' academic achievement and self-efficacy in financial accounting in Abia state. *International Journal of Recent Innovations in Academic Research*, 4(1), 37-48.
- Parker, J. & Asare, I. (2021). Teacher trainees' perceptions of think-pair-share technique in teaching classification of living organisms in colleges of education – Ghana. *Science Education International*, 32(4), 368-373. doi:10.33828/sei.v32.i4.12
- Surayya, L., Subagia, I.W., & Tika, I.N. (2014). Pengaruh model pembelajaran think-pair-share terhadap hasil belajar IPA ditinjau dari keterampilan berpikir kritis siswa [The effect of thnk-pair-share learning model on IPA learning results review from student's critical thinking skills. *E-Journal Program Pascasarjana Universitas Pendidikan Ganesha*, 4(1), 1-11.
- Usman, A.H. (2015). Using the think-pair-share strategy to improve students' speaking ability at Stain Ternate. *Journal of Education and Practice*, 6(10), 37-44.

