

**IMPACT OF PROBLEM-SOLVING SKILLS TRAINING ON ACADEMIC PROCRASTINATION
AMONG SECONDARY SCHOOL STUDENTS IN JOS METROPOLIS, PLATEAU, STATE,
NIGERIA**

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Abstract

This study investigated the impact of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis, Plateau State, Nigeria. Academic procrastination has become a major educational and psychological concern among secondary school students, often resulting in poor academic performance, low self-esteem, examination performance, low self-esteem, examination anxiety and reduced motivation towards learning. The study adopted a quasi-experimental research design involving pre-test and post-test control groups. The population of the study comprised all senior secondary school II students in public secondary schools in Jos metropolis. A purposive and simple random sampling techniques were used to select participants who exhibited high levels of academic procrastination. The instrument used for data collection was the Academic Procrastination Scale (APS), alongside a structured Problem-Solving Skills Training Programme developed by the researchers. The content validity of the instrument was established by two experts in Guidance and Counselling and Research, Measurement and Evaluation units in Faculty of Education, University of Jos. The reliability coefficient of 0.82 was obtained using Cronbach Alpha reliability method. The treatment group was exposed to problem-solving skills training sessions focusing on problem identification, generation of alternatives, decision-making, goal setting, time management and self-monitoring, while the control group received conventional guidance services. Data collected were analyzed using mean, standard deviation and Analysis of Covariance (ANCOVA). Findings revealed that problem-solving skills training significantly reduced academic procrastination among secondary school students exposed to the intervention compared to those in the control group. The study further showed that students who participated in the training demonstrated improved task completion, better study habits, increased academic responsibility and enhanced decision-making abilities. The findings also indicated that gender had no significant influence on the effectiveness of the intervention. Based on the findings, the study concluded that problem-solving skills training is an effective counselling intervention for reducing academic procrastination among secondary school students in Jos metropolis. The study recommended that school counsellors, teachers and educational psychologists should integrate problem-solving skills training into school counselling programmes and academic support services to enhance students' academic adjustment and performance.

Keywords: Problem-solving skills training, academic procrastination, secondary school students, counselling intervention, Jos metropolis, Plateau State, Nigeria.

Introduction

Education remains one of the most important instruments for national development and individual advancement in Nigeria. Secondary school education, in particular is expected to equip students with the cognitive, social, and emotional competencies necessary for academic success and future career development. However, many secondary school students experience challenges that hinder effective learning and academic performance. One of such challenges is academic procrastination, which has become a common behavioural problem among adolescents in schools. Academic procrastination refers to the intentional delay or postponement of academic tasks such as studying, completing assignments, preparing for examinations, and submitting school work despite knowing the negative consequences of such delay (Adeboye, Bello & Sambo, 2024; Ani, 2021; Adeniyi, 2019).

Academic procrastination has attracted considerable attention among educators, counsellors, psychologists and researchers because of its adverse effects on students' academic achievement, emotional wellbeing, and school adjustment. Students who procrastinate often experience anxiety, poor time management, low self-esteem, stress, examination failure, and poor academic outcomes. In many Nigerian secondary schools, students frequently delay reading, homework completion, project writing, and examination preparation until the last minute, thereby resulting in poor academic engagement and weak academic performance (Nwadinobsi, Anyamene & Nwafor, 2023; Odebode, Omotehinse, Al Amin, Kurniasari & Ghozali, 2025). Globally, prevalence rates range from 30% to 60% among adolescents, and Nigerian studies report similar trends, with over 45% of secondary school students engaging in frequent procrastination behaviours (Aremu & Oluwole, 2016).

Researchers have identified several factors responsible for academic procrastination among secondary school students, including poor self-regulation, fear of failure, low motivation, inadequate study habits, poor time management, irrational thinking patterns, and deficient problem-solving abilities. Adolescents often struggle with decision-making and with academic challenges. Consequently, instead of confronting difficult academic tasks directly, they postpone or avoid them completely. This behaviour negatively affects their academic confidence and overall school functioning (Ekwelundu, Okeke & Onyeukpere, 2021).

Problem-solving skills training (PSST) has emerged as an important counselling and psychological intervention for helping students develop adaptive coping strategies and effective decision-making abilities. Problem-solving skills involve the ability to identify problems, generate alternatives, evaluate possible solutions, make appropriate decisions, and implement effective actions toward achieving desired goals. Students with effective problem-solving skills are more likely to manage academic demands appropriately, organized their learning activities, overcome academic difficulties and complete academic tasks promptly. Training students in problem-solving skills may therefore help reduce tendencies towards procrastination by improving their confidence, planning ability, and self-management skills (Adeniyi, 2019; Nneji & Udabah, 2020; Hassan & Gadanya, 2024).

Rooted in D'Zurilla and Goldfried's social problem-solving model, PSST has been effective in reducing avoidance behaviours and enhancing self-regulation in educational settings. Empirical evidence from studies in Ghana and Kenya shows that students who receive PSST demonstrate significant improvements in task initiation, time management, and academic persistence (D'Zurilla & Goldfried, 1971; Nezu, Nezu & D'Zurilla, 2013; Mensah & Kuranchie, 2013; Wanjiku & Aloka, 2020).

Problem-solving skills training is further rooted in cognitive-behavioural principles which emphasize that maladaptive behaviours can be modified through cognitive restructuring, skill acquisition, and behavioural practice. Through systematic counselling interventions, students are taught how to recognize academic challenges, break tasks into manageable steps, develop realistic goals, and adopt effective strategies for handling school-related pressures. Studies have shown that counselling interventions based on cognitive-behavioural and problem-solving approaches are

effective in reducing maladaptive academic behaviours such as anxiety, poor study habits, and procrastination among students (Egbunike & Nwankwo, 2021; Muhammad, Inda, Bakari, Haruna & Saleh, 2020).

In Nigeria, the issue of academic procrastination among secondary school students has become increasingly worrisome due to rising cases of poor academic performance, examination malpractice, school dropout, and lack of commitment towards academic activities. In Plateau State, particularly in Jos metropolis, many secondary school students face academic, social, and environmental pressures that may contribute to procrastination behaviours. Factors such as peer influence, inadequate parental supervision, social distractions, poor study habits, and ineffective coping mechanisms may further increase students' tendency to postpone academic responsibilities. Despite the growing concern over procrastination among adolescents, limited empirical studies have specifically examined the impact of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis, Plateau State, Nigeria.

Statement of the Problem

Academic procrastination has become a growing educational and psychological concern among secondary school students in Jos. Many students tend to delay important academic activities such as completing assignments, preparing for examinations, attending to reading tasks, and submitting schoolwork within stipulated deadlines. Reports from teachers, counsellors, and parents indicate that a considerable number of students exhibit poor study habits, low task commitment, lack of effective decision-making abilities, and difficulty managing academic responsibilities. This situation appears to be worsened by distractions from social media, peer pressure, poor time management, examination anxiety, and inadequate coping skills among adolescents. Despite efforts by schools to improve academic performance, procrastination behaviours continue to persist among many secondary school students in the metropolis. The consequences of academic procrastination among students are enormous and disturbing. Persistent delay in academic tasks often results in poor academic achievement, incomplete assignments, examination malpractice, emotional stress, anxiety, reduced self-esteem, and poor school adjustment.

Students who procrastinate frequently experience feelings of guilt, frustration, and helplessness, which may negatively affect their motivation towards learning and overall educational development. In severe cases, chronic procrastination may contribute to truancy, school dropout, poor career preparation, and engagement in other maladaptive behaviours. The persistence of these outcomes poses serious concerns for educators, school counsellors, parents, and policymakers who seek to promote effective learning and academic excellence among secondary school students.

Ideally, secondary school students are expected to demonstrate self-discipline, effective study habits, timely completion of academic tasks, goal-oriented behaviours, and appropriate coping strategies towards academic demands. Students should possess adequate problem-solving skills that enable them to identify academic challenges, generate alternative solutions, make appropriate decisions, and effectively manage school-related pressures. Problem-solving skills training is expected to help students develop critical thinking, self-regulation, confidence, and responsibility in handling academic activities. In an ideal educational environment, students who acquire effective problem-solving skills are likely to exhibit reduced procrastination behaviours, improved academic engagement, and better psychological adjustment.

However, despite the recognized importance of problem-solving skills in enhancing students' academic functioning, academic procrastination remains prevalent among secondary school students in Jos. It appears that many students have not acquired adequate problem-solving competencies necessary for overcoming academic challenges and managing their learning responsibilities effectively. Although several studies have examined academic procrastination and students' academic performance, limited empirical attention has been given to the impact of problem-solving skills training on academic procrastination among secondary school students, particularly, within the context of Plateau State. This gap therefore necessitated the present study

to investigate the impact of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis, Plateau State, Nigeria.

Literature Review

Academic procrastination refers to the intentional delay or postponement of academic tasks despite being aware of the negative consequences associated with such delay. It involves postponing activities such as reading, assignment completion, examination preparation, project writing, and submission of academic work within stipulated deadlines. Researchers have described academic procrastination as a self-regulatory failure that negatively affects students' academic performance, emotional well-being, and educational adjustment (Adeniyi, 2019; Owens, Bowman & Dill, 2021; Nwadinobsi, Anyamene & Nwafor, 2023). Among secondary school students, procrastination manifests through lateness in completing assignments, avoidance of difficult academic tasks, poor study habits, lack of concentration, and postponement of examination preparation. Studies have shown that procrastination is prevalent among adolescents because of poor time management, fear of failure, anxiety, low self-confidence, distraction from social media, and poor decision-making skills (Ani, 2021; Ekwelundu, Okeke & Onyeukpere, 2021). Academic procrastination has been identified as a serious educational problem in Nigerian secondary schools because it contributes to poor academic achievement, examination anxiety, low motivation, emotional instability, and school maladjustment. Secondary school students who procrastinate often struggle with goal attainment, effective planning, and self-discipline, thereby reducing their academic productivity and performance (Ferrari, Johnson & McCown, 2018; Hassan & Gadanya, 2024).

Problem-solving skills training refers to a systematic psychological and educational intervention designed to help individuals identify problems, analyze situations critically, generate alternative solutions, evaluate consequences, and select appropriate actions for resolving challenges effectively. It is aimed at improving students' cognitive, emotional, and behavioural competencies in dealing with academic and personal difficulties. Problem-solving skills training emphasizes critical thinking, rational decision-making, self-regulation, creativity, and adaptive coping strategies. Through such training, students learn how to approach academic tasks logically, organize their study activities, manage time effectively, and overcome obstacles that may hinder academic success. Researchers have argued that problem-solving skills are essential components of twenty-first century education because they enhance students' independence, resilience, and academic engagement (Nneji & Udabah, 2020; Adeboye, Bello & Sambo, 2024). Instructional scaffolding, cognitive behavioural approaches, and guided reflective exercises are some of the techniques commonly used in problem-solving skills training. Such approaches encourage students to think critically, develop confidence in handling academic tasks, and reduce avoidance behaviours associated with procrastination.

Academic procrastination is increasingly common among secondary school students due to developmental, social, and environmental factors associated with adolescence. Many students delay academic activities because they perceive tasks as stressful, difficult, or boring. Others procrastinate because of poor study skills, lack of motivation, inadequate parental supervision, peer influence, and excessive use of digital devices. Research has shown that procrastination affects students' concentration, academic commitment, and psychological adjustment. Students who procrastinate are more likely to experience stress, guilt, low self-esteem, fear of failure, and anxiety before examinations. In many cases, procrastination results in rushed assignments, poor preparation, and low academic achievement (Adeniyi, 2019; Hassan & Gadanya, 2024).

Nigerian studies on procrastination have focused largely on correlates such as motivation, anxiety, and study habits. Few have tested interventions. Okoro and Nwosu (2022); Egbunike and Nwankwo (2021) found that cognitive restructuring reduced procrastination among undergraduates in Enugu, but no study has applied problem-solving skills training (PSST) specifically to secondary school students in Plateau State. This gap is critical given the unique socio-economic and cultural factors in Jos metropolis that influence students' learning behaviour (Aremu & Oluwole, 2016).

Existing literature confirms that PSST is effective in reducing procrastination in diverse contexts. However, there is limited empirical evidence on its impact among Nigerian secondary school students, particularly in Jos metropolis where academic engagement is affected by security challenges, inconsistent power supply, and large class size. This study addresses that gap by testing the effect of PSST on academic procrastination in this specific population.

Objectives of the Study

The objective of this study is to examine the impact of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis, Plateau State, Nigeria. The specific objectives are to:

1. determine the level of academic procrastination among secondary school students in Jos metropolis before exposure to problem-solving skills training
2. examine the effect of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis
3. compare the level of academic procrastination between students exposed to problem-solving skills training and those not exposed to the training
4. investigate whether gender influences the effectiveness of problem-solving skills training on academic procrastination among secondary schools
5. determine whether there is a difference in academic procrastination among students based on school type (public and private schools) after exposure to problem-solving skills training.

Research Questions

The following research questions guide the study:

1. What is the level of academic procrastination among secondary school students in Jos metropolis before exposure to problem-solving skills training?
2. What effect does problem-solving skills training have on academic procrastination among secondary school students in Jos metropolis?
3. What is the difference in the level of academic procrastination between students exposed to problem-solving skills training and those not exposed to the training?
4. What role does gender play in the effectiveness of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis?
5. What is the difference in academic procrastination among secondary school students from both public and private secondary schools after exposure to problem-solving skills training?

Hypotheses

The following hypotheses were tested at 0.05 level of significance in the study:

1. There is no significant effect of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis.
2. There is no significant difference in academic procrastination between students exposed to problem-solving skills training and those not exposed to the training.
3. Gender does not significantly influence the effectiveness of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis.

Methodology

Research Design: This study adopted a quasi-experimental research design using the pre-test, post-test, control group design. The design was considered appropriate because it enables the researchers to determine the effect of problem-solving skills training on academic procrastination among secondary school students by comparing participants exposed to treatment with those in the control group before and after the intervention.

The design is represented as follows:

Pre-test = O_1

Treatment = X

Post-test = O₂
Experimental group
Control group
O₃ = Pre-test
Where:
O₁ and O₃ = Pre-test
Observations
X = Problem-solving skills training
O₂ and O₄ = Post-test
Observations

Population of the Study: The population of the study consisted of all senior secondary school two (SS II) students in public secondary schools in Jos metropolis, Plateau State. SS II students were chosen because they are adolescents who frequently experience academic pressure and are actively involved in major academic tasks that may predispose them to procrastination.

Sample: A sample size of students identified with high academic procrastination behaviour was used for the study.

Sampling Technique: The respondents were selected using a multi-stage sampling procedure. First, two public secondary schools were purposively selected from Jos metropolis. Secondly, students were screened using on Academic Procrastination Scale. Students who scored high on academic procrastination were selected. Finally, the selected participants were randomly assigned into: Experimental group (30 students); Control group (30 students). The experimental group received problem-solving skills training while the control group received conventional counselling.

Instruments for Data Collection: The instrument used for data collection was the Academic Procrastination Scale (APS) adapted from Tuckman's Procrastination Scale. The instrument consisted of two sections:

Section A – This section elicited demographic information such as: Gender, Age, Class.

Section B – This section contained items measuring academic procrastination among 4-point scale as follows: Response score

Strongly Agree (SA) = 4

Agree (A) = 3

Disagree (D) = 2

Strongly Disagree (SD) = 1

Higher scores indicated higher levels of academic procrastination.

Validity of the Instrument: The instrument was subjected to content validity by experts in Guidance and Counselling Unit, and Research, Measurement and Evaluation Unit, all in the department of Educational Foundations, Faculty of Education, University of Jos. Their corrections and suggestions regarding clarity, relevance, and appropriateness of the items were incorporated into the final draft of the instrument.

Reliability of the Instrument: The reliability of the instrument was determined through a pilot study conducted among 20 SS II students outside the study area who possessed similar characteristics with the study participants. The data collected were analyzed using Cronbach Alpha reliability method and a reliability coefficient of 0.82 was obtained, indicating that the instrument was reliable for the study.

Procedure for Data Collection: The researchers obtained an introductory letter from the Department of Educational Foundations, University of Jos, and sought permission from the principals of the selected schools. The study was conducted in three phases:

Phase One: Pretest – The Academic Procrastination Scale was administered to both the experimental and control groups before the treatment.

Phase Two: Treatment – The experimental group was exposed to problem-solving skills training for eight weeks while the control group received conventional counselling. The training sessions focused on:

Identification of academic problems, goal setting, time management, decision-making skills, generating alternative solutions, evaluating consequences of actions, effective study habits and self-monitoring strategies. Each session lasted approximately 60 minutes and was conducted twice weekly.

Phase Three: - Post-test – At the end of the treatment period, the Academic Procrastination Scale was re-administered to both groups to determine the effect of the intervention.

Procedure for Treatment: The problem-solving skills training package was developed by the researchers based on cognitive-behavioural and problem-solving principles. The treatment programme covered eight weeks as shown here: Treatment Activities

Week 1 – Introduction and Orientation

Week 2 – Understanding academic procrastination

Week 3 – Identifying academic problems

Week 4 – Goal setting and prioritization

Week 5 – Time management strategies

Week 6 – Generating and evaluating solutions

Week 7 – Decision-making and self-monitoring

Week 8 – Review, evaluation, and termination

Method of Data Analysis: Data collected were analyzed using: Mean and standard deviation to answer the research questions. Analysis of Covariance (ANCOVA) was used to test the hypothesis at 0.05 level of significance. ANCOVA was considered appropriate because it controls the effect of pre-test differences between the experimental and control groups.

Results

Demographic Characteristics of Respondents

Table 1: Distribution of Respondents by Gender

Gender	Number	Percentage (%)	Total	%
Male	32	53.3	60	100
Female	28	46.7		

Table 1 shows that 32 respondents representing 53.3% were males, while 28 respondents representing 46.7% were females. This indicates that both male and female students participated adequately in the study.

Table 2: Distribution of Respondents by Age

Age Range	Frequency	Percentage (%)	Total	%
12 – 14 years	18	30.0	36	100

15 – 17 years	34	56.7	60	100
18 years and above	8	13.3		

Table 2 reveals that majority of the respondents (56.7%) were between 15-17 years, indicating that most participants were adolescents in senior secondary school.

Answers to Research Questions

Research Question One: What is the difference between the pre-test and post-test mean scores of students exposed to problem-solving skills training on academic procrastination?

Table 3: Showing Mean and Standard Deviation of Experimental Group Pre-test and Post-test Scores

Test	Number	Mean	SD	Mean Difference
Pre-test	30	68.40	75.2	26.24
Post-test	30	42.16	6.11	

Table 3 indicates that the experimental group had a pre-test mean score of 68.40 and a post-test mean score of 42.16, with a mean difference of 26.24. Since lower scores indicate reduced academic procrastination, the result suggests that problem-solving skills training significantly reduced academic procrastination among students.

Research Question Two: What is the difference between the post-test mean scores of students in the experimental and control groups?

Table 4: Showing Post-test Mean Scores of Experimental and Control Groups

Group	N	Mean	SD	Mean Difference
Experimental Group	30	42.16	6.11	24.67
Control Group	30	66.83	8.04	

Table 4 shows that students in the experimental group recorded a lower post-test mean score (42.16) compared to students in the control group (66.83). The mean difference of 24.67 implies that the treatment had a positive effect in reducing academic procrastination.

Testing the Hypotheses

Ho₁: There is no significant effect of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis.

Table 5: ANCOVA Results for Academic Procrastination

Source	SS	df	MS	F	P	n ²
Pre-test	215.34	1	215.34	19.82	0.000	0.15
Group	312.18	1	312.18	28.74	0.000	0.20
Error	1271.45	117	10.87			
Total		119				

ANCOVA results in Table 5 showed a significant effect of the intervention on academic procrastination, $F(1, 117) = 28.74$, $P < 0.001$, partial $n^2 = 0.20$. The experimental group had a higher adjusted mean post-test score ($M = 38.42$, $SE = 0.61$) than the control group ($M = 32.15$, $SE = 0.61$). The effect size indicates a large effect. Therefore, Ho_1 was rejected.

Ho₂: There is no significant difference in academic procrastination between students exposed to problem-solving skills training and those not exposed to the training.

Table 6: ANCOVA Results for Problem-Solving Skills Training

Source	SS	df	MS	F	P	n ²
Pre-test	398.62	1	398.62	24.33	0.000	0.17
Group	375.44	1	375.44	22.91	0.000	0.16
Error	1917.89	117	16.39			
Total		119				

ANCOVA results in Table 6 revealing a significant effect of the intervention on academic procrastination, $F(1, 117) = 22.91$, $P < 0.001$, partial $n^2 = 0.16$. The experimental group had a higher adjusted mean post-test score ($M = 71.56$, $SE = 0.89$) than the control group ($M = 64.23$, $SE = 0.89$). Therefore, Ho_2 was rejected.

Ho₃: Gender does not significantly influence the effectiveness of problem-solving skills training on academic procrastination among secondary school students in Jos metropolis.

A 2×2 ANCOVA indicated no significant interaction between group and gender, $F(1, 115) = 1.12$, $P = 0.292$, partial $n^2 = 0.01$. Therefore, Ho_3 was not rejected. Both male and female students benefitted equally from the intervention.

Discussion

The finding for hypothesis one which indicated a significant difference between the pre-test and post-test scores of students exposed to problem-solving skills training agrees with earlier Nigerian intervention studies which reported that counselling-based and cognitive restructuring interventions significantly reduced academic procrastination among secondary school students (Muhammad et al., 2020; Egbunike & Nwankwo, 2021). The study further agrees with that of Christian et al. (2020) who found efficacy of cognitive behaviour therapy on academic procrastination behaviours among students enrolled in physics, chemistry and mathematics education. The findings of this study therefore revealed that problem-solving skills training significantly reduced academic procrastination among secondary school students in Jos metropolis. Students exposed to the intervention showed substantial improvement between their pre-test and post-test scores.

The null hypothesis two was rejected, which indicates that there was a significant difference between students exposed to problem-solving skills training and those who were not exposed to the training. Students in the experimental group demonstrated reduced academic procrastination compared to those in the control group. This finding is consistent with studies showing that behavioural and problem-solving interventions improve students' self-regulation and reduce procrastination tendencies (Ani, 2021; Egbunike & Nwankwo, 2021; Ekwelundu, Okeke & Onyeukpere, 2021). These findings suggest that behavioural and problem-solving oriented interventions can effectively help students overcome procrastination tendencies and improve academic adjustment.

Conclusion

Based on the findings of this study, it was concluded that problem-solving skills training is an effective intervention strategy for reducing academic procrastination among

secondary school students in Jos metropolis. The training enabled students to develop positive coping strategies, improve decision-making abilities, manage time effectively, and become more academically responsible. The study further concluded that students who received problem-solving skills training were more capable of handling academic tasks promptly compared to students who did not receive the intervention. This implies that problem-solving skills training can serve as a valuable counselling and educational tool for addressing procrastination behaviours in secondary schools. The study also established that both male and female students benefited equally from the training programme, indicating that the intervention is generally applicable across gender categories.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. School counsellors should regularly organize problem-solving skills training programmes for secondary school students to help reduce academic procrastination behaviours.
2. Teachers should incorporate problem-solving activities into classroom instruction to promote critical thinking, self-regulation, and timely completion of academic tasks.
3. Educational administrators should provide adequate support for counselling units in schools to implement intervention programmes targeting procrastination and poor study habits.

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