



**RELATIONSHIP AMONG TIME PROCRASTINATION, TIME SOCIALIZATION
AND SENIOR SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN
PHYSICS IN GOMBE STATE, NIGERIA**

¹James, Andrawus Philip, ²Augustine Okoronka Ugwumba and ³Erem, Obadiah Aerga

¹Department of Science Education, Abubakar Tafawa Balewa University Bauchi, Bauchi State,
Nigeria

²Department of Physical Science Education, Modibbo Adama University Yola, Adamawa State
Nigeria

³Taraba State University Demonstration School Jalingo, Taraba State, Nigeria

E-mail Addresses: jamesphil360@gmail.com ugwuokoronka@gmail.com obadiaherem@gmail.com

Abstract

This study investigated the relationship among time procrastination, time socialization and students' academic achievement in physics in senior secondary schools in Gombe state. The study was guided by three research questions three hypotheses. The study adopted a correlational research design. The population of the study was 10,533 SSIII students offering physics in Gombe state out of which 385 students were selected using simple random sampling technique. Data were collected using Physics Students' Time Management Questionnaire (PSTMQ), adapted from Sayari, Jalagat and Dalluay (2017) and Physics Academic Achievement Pro forma (PAAP) developed by the researcher, which were validated by three experts and the PSTMQ had a reliability coefficient of 0.72 computed using Cronbach Alpha statistic. Data collected were analyzed using descriptive statistic (mean and standard deviation) and linear regression. It was found that time procrastination and socialization each significantly correlated with academic achievement with adjusted R-square values of 0.224 and 0.348 respectively with $p=0.000$ all through. The study recommended that the state government and other education stakeholders should organize workshops, periodically for secondary school students under their club activities in order to explain to them how deliberate time management can affect their academics positively.

Keywords: Time Procrastination, Socialization, Academic Achievement in Physics

Introduction

Physics is the systematic study of matter, energy, and their interactions, forming the foundation for scientific and technological development. In senior secondary schools, learning Physics provides the concepts, laws, and principles essential for pursuing careers in science-related disciplines. Furthermore,

Physics plays a pivotal role in driving sustainable economic growth across sectors such as agriculture, health, and engineering. Ensuring high academic achievement in the subject is therefore vital for national development.

Despite its importance, researchers like Oni (2014) report a persistent trend of

poor academic achievement among secondary school students. Academic achievement measures a student's drive to attain educational goals and success. Within Gombe State, data from the Ministry of Education (2023) show that from 2018 to 2022, an average of 58.27% of students who sat for the Senior Secondary School Certificate Examination (SSCE) in Physics failed to obtain a credit pass. This means more than half of the students missed the minimum admission requirement for higher education, placing Gombe State at a developmental disadvantage compared to other regions.

While past studies attribute poor performance to teaching methods, class size, school climate, and inadequate supervision (Bentil et al., 2018; Okoronka & Wada, 2014), academic performance remains low despite various interventions. This persistent gap necessitates exploring behavioral variables such as time management. Time management encompasses planning, prioritization, procrastination, socialization, and technology use (Aduke, 2015; Anteneh & Gebremeskel, 2023). This study specifically focuses on procrastination and socialization.

Procrastination is the act of postponing tasks that require immediate attention, typically opting for more pleasurable activities instead (Garcia-Ros et al., 2022). In academic settings, this manifests as delays in completing assignments, studying for exams, or managing responsibilities. While occasional delays happen, chronic procrastination causes severe stress, anxiety over deadlines, and poor performance (Garcia-Ros et al., 2022). Although Aduke (2015) suggests time management and goal-setting can remedy procrastination, Sayari et al. (2017) found no significant relationship between procrastination and academic performance, leaving a clear research gap.

Socialization is the process of learning values, knowledge, and skills necessary to participate meaningfully in society. Research indicates a link between socialization and academic achievement due

to its positive impact on cognitive development, motivation, and socio-emotional skills (Farnese et al., 2023). When students feel supported within their social networks, they approach academic challenges with greater persistence (Kahu et al., 2022). Furthermore, socio-emotional skills built through socialization help students form positive peer relationships and navigate group work (Balci, 2022). Conversely, Peteros (2021) found no significant relationship between social time and academic achievement.

Because existing studies present conflicting findings on how procrastination and socialization relate to academic success, further investigation is necessary. Therefore, this study aims to determine the relationship between procrastination, socialization, and students' academic achievement in Physics in senior secondary schools in Gombe State, Nigeria.

Statement of the Problem

Physics plays a critical role in national development necessitating in heavy investments and a focus for ensuring high academic achievement among students. Despite its acclaimed importance Nigeria's economic well-being of and its requirement for admission into science, technology and medical related disciplines, available data indicate a persistent issue. Over the last five consecutive years, an average of 58.27% candidates who sat for the subject in WAEC at O level in Gombe State did not obtain a credit pass (Gombe State Ministry of Education, 2023). This negative trend of poor academic achievement in Physics requires urgent improvement if Gombe State is to remain competitive and for Nigerian to hold its place among global nations.

Several factors have been adduced as causing poor achievement in Physics which include shortage of qualified teachers, inadequate funding, insufficient instructional materials, a lack of professional development programs for teachers, poorly equipped

laboratory and inappropriate teaching methods. However, the fact that poor achievement in Physics persists despite various stakeholder interventions by relevant stakeholders suggests that these traditional factors may not fully account for the problem. Because some students excel academically under the same conditions, there is need to explore behavioural and psychological factors, specially student procrastination and socialization.

Against this backdrop, there is need to determine the relationship among procrastination, socialization and academic achievement of senior secondary school students in physics in Gombe State.

Objectives of the Study

The objectives of the study were to determine the relationship:

1. Between procrastination and Students' academic achievement in Physics in Senior Secondary Schools in Gombe State.
2. Between socialization and Students' academic achievement in Physics in Senior Secondary Schools in Gombe State.
3. Among procrastination, socialization and academic achievement in Physics in senior Secondary Schools in Gombe state.

Research Questions

The following research question were raised to guide the study

1. What is the level of procrastination of Physics Students in Senior Secondary School in Gombe State?
2. What is the level of Socialization of Students in Physics in Senior Secondary School in Gombe State?

3. What is the mean academic achievement score of Students in Physics in Senior Secondary Schools in Gombe State?

Research Hypotheses

The study was guided by the following null hypotheses which were formulated and tested at 0.05 level of significance

- Ho₁:** There is no significant relationship between procrastination and students' academic achievement in Physics
- Ho₂:** There is no significant relationship between socialization and Students' academic achievement in Physics
- Ho₃:** There is no significant relationship among procrastination, socialization and academic achievement in physics

Method

The study adopted correlational survey research design. The population of the study consisted of 10,533 SSIII students offering physics during 2023/2024 academic session. The sample for the study comprised 385 students which were determined using Taro Yamane formula. A simple random sampling technique was used to select 12 schools across the 11 Local Government Areas (LGAs) of Gombe State followed by the random selection of 385 students the selected schools.

Data were collected using two instruments; the Physics Students' Time Management Questionnaire (PSTMQ) adapted from Time Management Questionnaire (TMQ) by Sayari, Jalagat and Dalluay (2017), and Physics Academic Achievement Pro forma (PAAP), developed by the researcher. The questionnaire was valeted by three experts and subjected to a reliability test, yielding Cronbach alpha coefficient reliability.

With the assistance of three research assistants, the questionnaires were administered to the participants and retrieved

upon completion. Additionally, the research met with the examination officers of the sampled school to extract the first, second and third term examination result of the students from SSII 2022/2023 academic session using the PAAP. Data collected were analysed using mean and standard deviation to answer the research question whereas simple linear

regression and multiple regressions were used to test the null hypotheses at 0.05 level of significance.

Results

The results of data collected and analysed are presented below.

Table 1: Summary of Mean and Standard Deviation for Student Procrastination, Socialization, and Academic Achievement

Variable / Research Question(RQ)	N	Grand Mean	S. D	Remark / Level
RQ1: Procrastination Level	385	3.21	1.48	Medium Level (ML)
RQ2: Socialization Level	385	2.82	1.47	Medium Level (ML)
RQ3: Academic Achievement	385	49.47	15.29	Moderate

Table1 presents the overall findings for the three research questions.

For **Research Question One**, the analysis yields a grand mean of 3.21 (S.D = 1.48), indicating a medium level of procrastination among Physics students in Gombe State.

For **Research Question Two**, the grand mean stands at 2.82 (S.D = 1.47), reflecting a moderate level of student socialization.

For **Research Question Three**, the mean academic achievement score is 49.47 (S.D = 15.29), demonstrating moderate overall performance with a wide dispersion of scores across the cohort.

Hypothesis one

Ho₁: There is no significant relationship between procrastination and students' academic achievement in physics.

Table 2: Summary of ANOVA from Linear Regression Analysis of Correlation between Procrastination and Students' Academic Achievement in Physics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20139.981	1	20139.981	111.326	.000 ^b
	Residual	69107.808	383	180.910		
	Total	89247.789	384			

a. Dependent Variable: students' academic achievement

b. Predictors: (Constant), Procrastination

From the table above, the result shows that procrastination is significantly related with students' academic achievement in physics, $F(1, 383) = 111.326$, $p < 0.05$. The null

hypothesis is rejected because the p-value (0.000) is lower than the significance level of 0.05.



Table 3: Model Summary Table from Linear Regression Analysis of Correlation between Procrastination and Students' Academic Achievement in Physics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475 ^a	.226	.224	13.45030

a. Predictors: (Constant), Procrastination

According to the results, procrastination contributes 22.4% to the variation in academic achievement. There is also a

moderate relationship between procrastination and academic achievement based on the r-value of 0.475.

Table 4: Coefficients of Beta from Linear Regression Analysis of Correlation between Procrastination and Students' Academic Achievement in Physics

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	88.597	3.771	23.496	.000
	Procrastination	-12.189	1.155	-.475	.000

a. Dependent Variable: students' academic achievement

The Beta coefficient is -0.475, with $t = -10.551$ and $p < 0.05$. This result signifies a significant moderate negative correlation between procrastination and students' academic achievement in physics. This implies that as students procrastinate more, they tend to achieve less.

Hypothesis two Ho2: There is no significant relationship between socialization and students' academic achievement in Physics. The hypothesis is tested using data displayed on Table 5.

Table 5: Summary of ANOVA from Linear Regression Analysis of Correlation between Socialization and Students' Academic Achievement in Physics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31194.498	1	31194.498	205.265	.000 ^b
	Residual	58053.291	383	151.972		
	Total	89247.789	384			

a. Dependent Variable: students' academic achievement

b. Predictors: (Constant), Socialization

The results indicate a significant relationship between socialization and academic achievement in physics, with $F(1, 383) =$

205.265, $p < 0.05$. As the p-value (0.000) is less than alpha value of 0.05, the null hypothesis is rejected.

Table 6: Model Summary Table from Linear Regression Analysis of Correlation between Socialization and Students' Academic Achievement in Physics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.591 ^a	.350	.348	12.32769

a. Predictors: (Constant), Socialization

The results revealed that 34.8% of the variation in academic achievement could be attributed to socialization. The r-value of

0.591 also indicates that there is a strong relationship between socialization and academic achievement.

Table 7: Coefficients of Beta from Linear Regression Analysis of Correlation between Socialization and Students' Academic Achievement in Physics

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	-13.984	4.474		-3.126	.002
	Socialization	23.236	1.622	.591	14.327	.000

a: Dependent Variable: students' academic achievement

The result shows a beta coefficient of 0.591, $t = 14.327$, $p < 0.05$. This indicates that there is a significant high positive relationship between socialization and students' academic achievement in physics

Hypothesis Three

Ho3: There is no significant correlation between time management skills (time planning, time prioritization, time procrastination and time socialization) and students' academic achievement in physics.

Table 8: Summary of ANOVA from Multiple Regression Analysis of Correlation between Time Management Skills (Time Procrastination and Time Socialization) and Students' Academic Achievement in Physics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	392.481	2	196.241	6.563	.002 ^b
	Residual	11422.896	382	29.903		
	Total	11815.377	384			

a. Dependent Variable: Students' academic achievement

b. Predictors: (Constant), socialization, procrastination

The result showed a significant correlation among time procrastination, time socialization and students' academic achievement in

physics, with $F(2, 384) = 6.563$, $p < 0.05$. as p-value (0.02) is below 0.05 significant threshold, the null hypothesis is rejected

Table 9: Model Summary from Multiple Regression Analysis of Correlation between Time Management Skills (Time Procrastination and Socialization) and Students' Academic Achievement in Physics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.182 ^a	.033	.028	5.46835

a. Predictors: (Constant), socialization, procrastination

The result indicates that 2.8% of the variation in academic achievement can be attributed to time procrastination and socialization. The r-

value of 0.33 moderate correlation between the variables.

Table 10: Coefficients of Beta from Multiple Regression Analysis of Correlation between Time Management Skills (Time Procrastination and Socialization) and Students' Academic Achievement in Physics

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.570	1.935		11.664	.000
	Procrastination	.036	.049	.037	.728	.467
	Socialization	.204	.059	.174	3.447	.001

a. Dependent Variable: Students' academic performance

The regression analysis presented revealed how each variable included in the model contributed in predicting academic achievement. Socialization has a beta value of 0.174, which means that socialization explains 17.4% of the variance in academic achievement, at $t = 3.447$, p -value of 0.001.

Discussion of findings

The result of testing hypothesis one reveals a significant negative correlation between procrastination and academic achievement. This suggests that students who procrastinate in their studies tend to achieve lower grades compared to their peers who manage their time effectively. However, the observation some individuals manage to succeed despite procrastination, indicating that its impact can vary based on individual differences and contextual factors. This finding aligns with the result of studies

conducted by Jourbert (2015). In contrast, the findings of Peteros (2021), Sayari et al. (2017) differ from this result reporting no significant relationship

Furthermore, the finding of this study shows that the socialization of students offering physics is at a moderate level and a positive significant relationship exists between socialization and academic achievement in physics. This implies that students who maintain balance social engagement tend achieve higher academic success in the subject. Whereas poorly managed social interactions detract from academic performance. This finding agrees with those of Razali (2018), though it differs from the findings of Sayari et al. (2017).

Lastly, moderate and significant correlation between time procrastination, socialization and students' academic achievement in physics was found. These

indicate that students who maintain a balance in procrastination, and socialization are more likely to excel in their physics studies compared to those who lack equilibrium in these areas. Students who, handle social circle and manage procrastination tend to achieve higher academic performance. This finding is consistent with the finding of Calonia et al., (2023). On the contrary, this finding contrasts with the results of Peteros (2020) and Sayari, Jalagat and Dalluay (2017).

Conclusion

Based on the findings of this study, it is concluded that time procrastination and socialization significantly correlate with academic achievement of students in physics in secondary schools in Gombe state. Managing procrastination and maintaining a balance social interaction are critical factors

Recommendations

Based on the findings, it was that following recommended the educators should incorporate time management training into the curriculum. This could involve teaching students how to manage social circles and avoid delaying task

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