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Teachers' Experience, Formative Assessment Practices and Secondary School Students' Achievement in Geography: A Structural Equation Modelling (SEM) Technique

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Abstract

This study investigated the influence of teachers' experience and formative assessment practices on secondary school students' achievement in Geography in Cross River State using Structural Equation Modelling (SEM) technique. One research question and two null hypotheses guided the study, which adopted the model-testing correlational survey research design. The study's population comprised 363 SS2 Geography teachers in 269 public secondary schools in the State. All the teachers were used for the study. Teachers' Formative Assessment Practices Questionnaire (TFAPQ) and Proforma for Students' Achievement in Geography (PSAG) developed by the researchers were used for data collection. The reliability of the TFAPQ after trial-testing was computed using Cronbach Alpha, which yielded overall coefficient of 0.93. Data collected were analysed using WarpPLS computer-based software. The findings, among others, revealed a significant and adequate model fit in the influence of teachers' experience and formative assessment practices on students' achievement in Geography. Teachers' experience and most formative assessment practices had significant direct influence on students' achievement in Geography. Teachers' experience had significant indirect influence on students' achievement through formative assessment practices. Hence, it was recommended among others, that Geography teachers should be encouraged to regularly integrate diverse formative assessment practices during instruction to improve their students' achievement.

Keywords: Teachers' experience, Formative assessment practices, Achievement in Geography, Structural Equation Modelling (SEM) technique

INTRODUCTION

Students' achievement in various school subjects can be influenced by a complex interplay of instructional, teacher-related, assessment-driven, and student-related variables. Understanding how these variables simultaneously influence students' achievement has continued to attract the attention of educators, researchers, policymakers, and other stakeholders in the education sector. This concern is evident in senior secondary school Geography, a subject that plays a critical role in helping learners understand the physical environment, human activities, and the dynamic interactions among them for sustainable development. Despite this recognised importance, students' achievement in Geography has remained unsatisfactory, thereby necessitating continuous efforts to identify the factors responsible for this persistent trend.

Students 'achievement remains a central construct in educational research due to its role as an indicator of the effectiveness of teaching and learning processes. It is commonly defined as the extent to which students attain predetermined educational objectives, usually measured through test scores, grades, or other forms of evaluation (Steinmayr et al., 2015). Thus, achievement refers to the measurable learning outcomes of senior secondary school students in Geography after exposure to classroom instruction and assessment activities. Available evidence from the West African Examinations Council (WAEC) and National Examinations Council (NECO) Chief Examiners' Reports from 2016 to 2025 indicates that students' academic achievement in Geography has fluctuated over the period and generally remained below average.

Several notable factors have been identified in the literature as contributing to students' poor achievement in Geography, which include inappropriate instructional strategies, lack of qualified and experienced teachers (Akintola & Bello, 2021). Nwosu and Okeke, 2022) added insufficient instructional materials, overcrowded classrooms, and ineffective assessment practices. In response to these challenges, various efforts including recruitment of qualified teachers, in-service training, regular workshops and seminars, provision of instructional materials such as maps, globes, and geographical tools have been made by the relevant educational stakeholders (Akintola & Bello, 2021; Ofem & Ajayi, 2023). Yet, the 2025 WAEC Chief Examiners' Report noted that candidates' performance in Geography was poorer than in recent years and remained unsatisfactory. This necessitates a further research into various teacher-related factors that may account for students' unsatisfactory achievement in the subject.

One of such potential teacher-related factor appears to be teaching experience. According to Kini and Podolsky (2016), teachers' experience refers to the number of years a teacher has spent in active classroom instruction,

contributing to pedagogical expertise and effectiveness. Although some studies have reported that experienced teachers contribute significantly to improved students' academic achievement (Olatunji & Akinwale, 2022; Podolsky et al., 2019), others have found weak or insignificant relationships, suggesting that the influence of teaching experience may vary across school subjects and instructional practices (Darling-Hammond, 2022; Andor et al., 2026). This lack of consensus of empirical evidence suggests that teaching experience remains an important teacher-related variable requiring further empirical investigation.

Apart from teachers' experience, their formative assessment practices are also considered as potential determinants of students' learning outcomes. Formative assessment has been defined by Nworgu (2019) as the type of assessment undertaken while a lesson, course or programme is still ongoing in order to collect relevant data and feedback to improve learning. Formative assessment is continuous, diagnostic, and learner-centred unlike summative assessment, which evaluates learning at the end of instruction (Black & Wiliam, 2019). It helps teachers identify students' strengths and weaknesses, while enabling students to take active responsibility for their learning and this in turn affect their achievement in any subject, including Geography.

Teachers use a range of formative assessment practices to track learning, detect misconceptions and modify teaching to enhance achievement. Black and Wiliam (2019) mentioned such practices to include classroom questioning, feedback, peer assessment, self-assessment, and instructional adjustments. Heritage (2010) earlier mentioned observation, eliciting evidence of learning, and the provision of timely feedback. Another strand by Fisher and Frey (2014) include exit slips, classroom questioning and checks for understanding, while other scholars (Cooper et al., 2019; Fan et al., 2017), highlighted homework and practice assignments as another formative assessment practice. Thus, this study sought to examine eight formative assessment practices such as classroom observation, low stakes quizzes and tests, exit slips, self-assessment, classroom discussion, homework and practice, performance tasks, and feedback mechanisms.

Observation of student behaviour, engagement and learning processes in the classroom is systematic and used to inform decisions around teaching and learning, According to Heritage (2010), this is opposed to high stakes examinations. Carless (2017) noted that low-stakes quizzes and tests are used to assess understanding without the pressure of high-stakes exams. Exit slips according to Fisher and Frey (2014) are short statements that assess student learning at the end of the lesson in order to clarify and highlight what areas need to be addressed next. The same goes with self-assessment, which Panadero (2017) noted that it helps the learner to compare his/her performance with the criteria, point out the problems and take remedial measures. According to Cooper et al. (2019), the interactive learning, deeper understanding and critical thinking that is promoted through classroom discussions is complemented by the reinforcement and extension of classroom learning that occurs through homework and practice assignments. On the other hand, Brookhart (2018) described performance tasks as learning activities that measure the higher-order thinking, problem-solving and application of knowledge. While, Wisniewski et al. (2020) noted that feedback plays a key role in supporting these practices as it assists students to identify their strengths and weaknesses, adjust their learning strategies, and enhance their academic achievement.

It is important to note that well designed and well executed formative assessment practices can support student success in Geography in four ways. This include by identifying issues with learning, by giving students feedback on their learning as it happens, by encouraging self-regulated learning, by providing opportunities for inclusive classroom discussions, and by reinforcing practical skills through the use of assignments and performance tasks. For example, Black and Wiliam (2019) asserted that classroom observation can provide explicit feedback about students' challenges with map reading, spatial analysis, and environmental interpretation. In addition Brookhart (2021) suggest that frequent, proactive feedback can guide students to track their learning and enhance their skills. Likewise, structured self-evaluation, intentional class conversations and thoughtfully designed lessons and tasks can promote engagement, self-directed learning, and real-world learning (Alexander, 2018; Brookhart, 2018; Howe, 2020). If not well designed, applied, supervised or linked to clearly defined learning goals, however, these can lead to superficial learning, to the reinforcement of incorrect views of learning, to decreased motivation and to a loss of the potential effect on achievement.

The use of formative assessment practices to improve learning is the hallmark of education and research. But unfortunately, some scholars have maintained that teachers are not always successful in effectively implementing formative assessment practices (Ajogbeje & Ojo, 2022; Bassey, 2023). This may have an unfavourable impact on students' academic achievement in Geography. Empirical studies have shown that, classroom discussions, quizzes, and performance tasks as forms of structured formative assessments are effective in enhancing their achievement (Black & Wiliam, 2019; Ozan & Kincal, 2021; Ajayi & Ogunyemi, 2022). However, the relationship between these practices and achievement in Geography, in particular in Cross River State has not been studied in detail enough. In addition, the potential role of moderating effect of teachers' teaching experience needs to be explored, which requires using a robust statistical technique like structural equation modeling (SEM) to analyze the relationship between these variables.

Structural equation model (SEM) is a multivariate statistical technique that provides researchers a platform to comprehensively investigate and understand the connections between certain groups of variables that are theoretically related and need to be studied simultaneously (Schumacker & Lomax, 2010; Andor et al., 2026). It accounts for measurement error, tests theoretical assumptions, and provides a more robust understanding of the structural relationships among variables compared to traditional statistical methods. This approach is particularly useful in situations where model specification correctness cannot be guaranteed and prediction accuracy is of the utmost importance (Avkiran & Ringle, 2018; Hair et al., 2011; Agah et al., 2022). Particularly, since the Partial Least Square SEM (PLS-SEM) is more efficient, robust and guarantees precision in the simultaneous prediction, especially when testing hypotheses that involve intricate and interconnected endogenous and exogenous variables, its application in this study is highly imperative.

Research Questions

The following research question guided the study:

1. What is the most parsimonious model that explains the influence of teachers' teaching experience and formative assessment practices (observation, low-stakes quizzes and tests, exit slips, self-assessment, classroom discussions, homework and practice assignments, performance tasks, and feedback mechanisms) on students' academic achievement in Geography?

Hypotheses

The following hypotheses were formulated for the study and were tested at .05 level of significance.

H_{O1}: Teachers' teaching experience and formative assessment practices do not have significant direct effects on students' academic achievement in Geography.

H_{O2}: Teachers' teaching experience has no significant indirect effect on students' academic achievement in Geography through formative assessment practices.

METHODS

This study adopted model-testing correlational survey research design and was carried out in Cross River State, Nigeria. The population comprised all Senior Secondary School two (2) Geography teachers in public secondary schools in the State. Since the population was small and manageable, the entire population was used for the study. Two instruments; Teachers' Formative Assessment Practices Questionnaire (TFAPQ) and Proforma for Students' Achievement in Geography (PSAG), developed by the researchers were used for data collection. The TFAPQ is a structured questionnaire consisting of two sections (A and B). Section A elicited demographic information of respondents, specifically teachers' teaching experience in Geography. Teaching experience was categorized thus: 5 years and below, 6–10 years, 11–15 years, 16–20 years, and 21 years and above. Section B contained eight (8) clusters with 10 items each, with a total of 80 items, designed to measure teachers' formative assessment practices in Geography classrooms. The clusters include: Cluster I which elicited data on Classroom Observation, cluster II on Quizzes and Tests (Low-stakes), cluster III on Exit Slips, cluster IV on Self-Assessment, cluster V on Classroom Discussions, Cluster VI on Homework and Practice Assignments, cluster VII on Performance Tasks and cluster VIII on Feedback Mechanisms. The respondents were required to indicate how often they use each of the formative assessment practice using a four-point Likert-type scale with response options of Always (4), Often (3), Rarely (2), and Never (1). The TFAPQ was used to gather data on the extent to which Geography teachers apply Geography teachers' formative assessment practices. The Proforma for Students' Academic Achievement in Geography (PSAAG) was used to gather Senior Secondary School two (SSS2) students' Mock examination scores in Geography for 2025. This served as a measure of students' academic achievement in Geography

Three experts; two from Educational Research, Measurement and Evaluation, and one from the field of Geography Education face-validated the instruments. The reliability of the TFAPQ was determined after trial-testing the validated version on 20 Geography teachers drawn from 10 public secondary schools in Uyo, Akwa-Ibom State, who were not part of the study but shares common characteristics with the study population. The internal consistency of the TFAPQ was determined using the Cronbach Alpha method, computed with SPSS version 27. This method was considered appropriate because the instrument in a Likert-type format with polytomous response options. The reliability coefficients obtained for the clusters were as follows: Classroom Observation (0.82), Quizzes and Tests (0.79), Exit Slips (0.81), Self-Assessment (0.83), Classroom Discussions (0.80), Homework and Practice Assignments (0.78), Performance Tasks (0.84), and Feedback Mechanisms (0.85). The overall reliability coefficient of the TFAPQ was 0.93, indicating a high level of internal consistency and reliability of the instrument. The PSAAG did not require reliability testing since it is a document-based instrument used to extract Senior Secondary School two (SSS2) students' Mock examination scores in Geography for 2025. The data collection process was carried out by the researchers and 15 research assistants. The research assistants were properly briefed and oriented on the objectives of the study, ethical considerations, and proper administration procedures of the instruments.

Data gathered were sorted, coded, screened and analyzed using WarpPLS computer-based statistical software. The research question and null hypotheses were addressed based

on the evaluation of the measurement and structural aspects of the estimated (empirical) causal model. The measurement model was evaluated using the convergent and discriminant validity indices. The convergent validity was determined using i) item loadings, ii) composite reliability index and iii) the average variances extracted (AVE); whereas the discriminant validity was evaluated using the square root of AVE (acceptable if the square root of AVE for each latent variable is greater than the correlations involving all the latent variables). The structural model was evaluated using Stone Gassier's Q2 (Q2 < 0) and the path coefficients (β) (Avkiran, & Ringle, 2018). The direct and indirect effects were determined using effect size (f^2), values, ≥ 0.35, 0.15 and 0.02 implying large, medium, and small effect size respectively of exogenous variable(s) on an endogenous variable. Lastly, the model fit indices; Standard Root Mean Square Residual (SRMSR) value < 0.08, and NFI > 0.95, small > = 0.1, medium > = 0.25, large > = 0.36 were evaluated to determine the degree of fitness of the model (Kock, 2020). The null hypotheses were tested at 0.05 level of significance (α<.05).

RESULTS

This results from data analysis are presented below.

Research Question One: What is the structural equation model that explains the influence relationships among teachers' experience, formative assessment practices, and students' academic achievement in Geography?

After the development and estimation of the model, the indicators of the variables in the model were assessed for convergent and discriminant validities. The convergent validities obtained were evaluated by considering the loadings of the items and the Average Variance Extracted (AVEs) using the Fornell and Larcker (1981) criteria, which states that the values of the AVEs should be greater than or equal to 0.40 (AVE > 0.40). Based on the recommended threshold for the validities, modifications were made to the estimated hypothesized model to achieve the parsimonious structural model that explains the influence of teachers' experience and formative assessment practices on students' academic achievement in Geography. The result of the trimmed model is as presented in Figure 1.

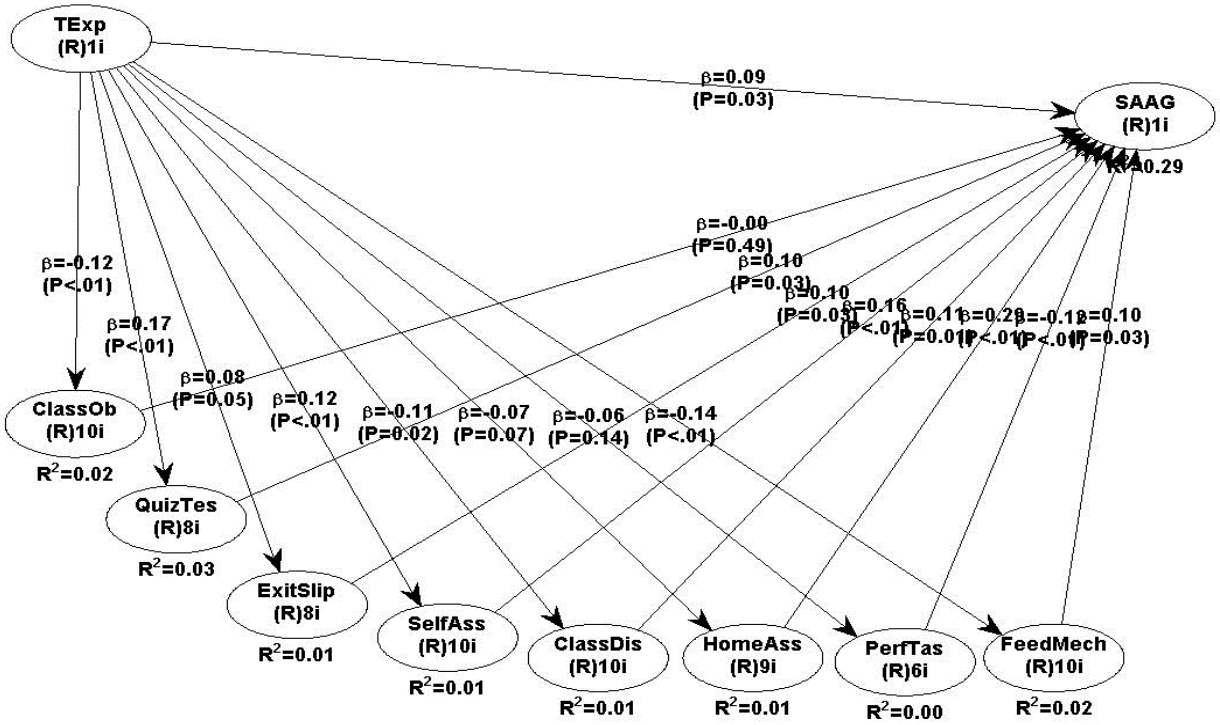


Figure 1: The Trimmed PLS-SEM Model

Figure 1 shows the analysis of the fitness of the trimmed model to the empirical data. The model indicates the strength of each of the variables and their indicators. This is used to describe the amount of relationships among the variables in the model. Out of the 17 paths that formed the structural model, 13 paths had path coefficients which were considered significant. This is because the p-values associated with the t-values obtained for the paths were less than 0.05 level of significance (p < 0.05) at which the results were being tested. This means that the 13 paths significantly explain their direction of influence in the model. Conversely, four (4) paths were not statistically significant because the p-values associated with the t-values obtained for the paths were greater than 0.05 level of significance (p > 0.05). This means that the four (4) paths did not significantly explain their direction of influence in the

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model. In essence, the paths were not important in explaining their direction of influence in the model in relation to the endogenous variables. For instance, the paths from teachers' teaching experience (TExp) to exit slips (ExitSlips), performance tasks (PerfTas), and homework and practice assignments (HomeAss) were insignificant; thus, the paths were deleted from the model. Likewise, the path from Classroom observation (ClassOb) to students' academic achievement in Geography (SAAG) was not statistically significant because the p-value associated with the t-value obtained for the path was greater than 0.05 level of significance ($p > 0.05$). Hence, the 13 path with significant coefficients, indicating significant contribution to the model were retained accordingly. Furthermore, the stone Geisser indicator (Q2) for all the endogenous variables were evaluated. The results indicate that the Q2 values obtained for the endogenous variables; ClassOb (0.016), QuizTes (0.028), ExitSli (0.008), SelfAss (0.016), ClassDis (0.011), PerfTas (0.005), FeedMech (0.019), HomeAss (0.006) and SAAG (0.295) were greater than zero (0), which signifies that the variables have small, moderate and considerable predictive validity, which shows that the model is close to reality. Thus, the model have predictive validity. The model was thereafter modified, re-specified and re-estimated so as to achieve the parsimonious (meaningful) model presented in Figure 2.

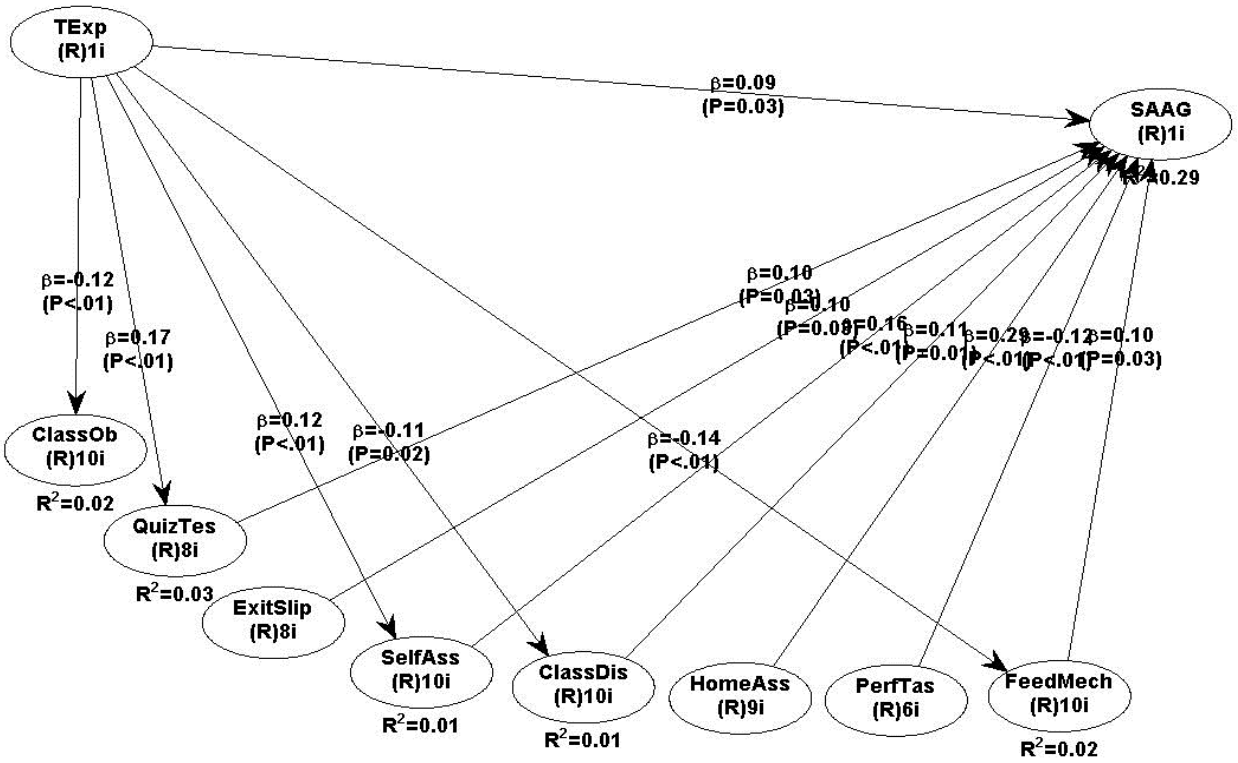


Figure 2: The Empirically Validated (Parsimonious) PLS-SEM Model

Figure 2 presents the parsimonious that explains the influence of teachers' teaching experience (TExp) and formative assessment practices (FAPs), which include classroom observation (ClassOb), low-stakes quizzes and tests (QuizTes), exit slips(ExitSlips), self-assessment (SelfAss), classroom discussions (ClassDis), homework and practice assignments (HomeAss), performance tasks (PerfTas), and feedback mechanisms (FeedMech) on students' achievement in Geography (SAAG). This is because all the paths in the model were significant ($p < 0.05$). Therefore, Figure 2 represents the parsimonious (meaningful) structural equation model that explains the influence relationships among teachers' teaching experience, formative assessment practices, and students' achievement in Geography.

HO1: Teachers' teaching experience and formative assessment practices do not have significant direct effects on students' academic achievement in Geography.

Table 1: ***Magnitude of direct effects of teachers' teaching experience (TExp) and formative assessment practices (FAPs) on students' academic achievement in Geography***

S/N	Path	β	Standard Error	Effect Size (f^2)	Magnitude of influence	t-values	p-values	Decision
1.	TExp > SAAG	0.093	0.051	0.007	Small	1.834	0.034	S
2.	QuizTes > SAAG	0.096	0.051	0.010	Small	1.890	0.030	S
3.	ExitSli > SAAG	0.099	0.051	0.029	Small	1.941	0.027	S
4.	SelfAss > SAAG	0.163	0.050	0.059	Small	3.228	0.001	S
5.	ClassDis > SAAG	0.112	0.051	0.035	Small	2.216	0.014	S
6.	PerfTas > SAAG	0.124	0.051	0.016	Small	2.452	0.007	S
7.	FeedMech > SAAG	0.099	0.051	0.012	Small	1.952	0.026	S
8.	HomeAss > SAAG	0.285	0.049	0.151	Moderate	5.768	0.001	S

Note: β = Beta coefficient, S= Significant, NS = Not Significant; $f^2 \geq 0.35$ implies Large effect, $\geq$ 0.15 implies Moderate effect, and $\geq$ 0.02 implies Small effect

Result in Table 1 shows that teachers' experience (TExp) had small but considerable direct effect (β= 0.093, f2= 0.007) on students' achievement in Geography (SAAG). This means that one unit change in teachers' experience (TExp) will lead to a 0.007 (small) change in students' achievement in Geography. The various formative assessment practices (FAPs) such as classroom observation (ClassOb), low-stakes quizzes and tests (QuizTes), exit slips(ExitSlips), self-assessment (SelfAss), classroom discussions (ClassDis), performance tasks (PerfTas), and feedback mechanisms (FeedMech) also recorded small but considerable direct effects on students' achievement in Geography, respectively. This means that one unit change in various formative assessment practices would account for a considerable change in their academic achievement in Geography. Furthermore, homework and practice assignments (HomeAss) had moderate and considerable direct effect (β= 0.285, f2= 0.151) on students' achievement in Geography, implying that one unit change in homework and practice assignments (HomeAss) would account for a considerable change in their achievement in Geography.

The result further revealed that teachers' teaching experience and formative assessment practices have significant (p < 0.05) direct effects on students' achievement in Geography. This is because the p-values associated with the t-values obtained for the direct effects of each of teachers' experience and formative assessment practices on students' academic achievement in Geography in the parsimonious model are less than 0.05 (p < 0.05) level of significance at which the hypothesis was tested. Therefore, the null hypothesis one was rejected. This implies that teachers' experience and formative assessment practices have significant direct effects on students' achievement in Geography.

HO_2: Teachers' teaching experience has no significant indirect effect on students' academic achievement in Geography through formative assessment practices.

Table 2: ***Indirect effects of teachers' teaching experience (TExp) on students' academic achievement in Geography (SAAG) through formative assessment practices (FAPs)***

S/N	Path	β	Standard Error	Effect Size (f^2)	Magnitude of influence	*p*-value	Decision
1.	TExp > FAPs > SAAG	0.090	0.051	0.007	Small	0.034	S

Note: β = Beta coefficient, S= Significant, $f^2 \geq 0.35$ implies Large effect, $\geq$ 0.15 implies Moderate effect, and $\geq$ 0.02 implies Small effect

The indirect effects analysis in Table 2 revealed that teachers' experience exerted a positive and statistically significant indirect effect on students' academic achievement through formative assessment practices (β = .090, SE = .051, p = .034), based on the 95% bias-corrected and accelerated (BCa) bootstrap p-value. Thus, the null hypothesis two was rejected since the probability value (034) was less than .05 level of significance at which the result is being tested. Hence, inference drawn was that teachers' teaching experience significantly influences students' academic achievement indirectly through formative assessment practices.

DISCUSSION

The findings of this study revealed the parsimonious that explains the influence of teachers' teaching experience and formative assessment practices, which include classroom observation, low-stakes quizzes and tests, exit slips, self-assessment, classroom discussions, homework and practice assignments, performance tasks, and feedback mechanisms on students' academic achievement in Geography. This finding may be attributed to the multidimensional nature of students' academic achievement, which is seldom influenced by a single factor but rather by the interaction of teacher characteristics and instructional processes. Teaching experience equips teachers with accumulated pedagogical knowledge, classroom management skills and instructional competence, while formative assessment practices provide continuous information about students' learning progress, enabling teachers to modify instruction and address learning difficulties promptly. The finding agrees with several previous empirical studies reviewed in

this study. For instance, Kocakaya and Kocakaya (2014) reported that their structural equation model involving teacher-related variables and students' science and Mathematics achievement demonstrated acceptable model fit and significant structural relationships. Similarly, Okeke, Igbokwe, and Eze (2022) reported that their PLS-SEM model involving teacher quality, school climate and students' motivation adequately explained students' achievement in Geography through significant direct and mediated pathways.

The findings further revealed that teachers' teaching experience had a statistically significant direct effect on students' academic achievement in Geography. Similarly, formative assessment practices, namely low-stakes quizzes and tests, exit slips, self-assessment, classroom discussions, performance tasks, feedback mechanisms, and homework/practice assignments, exerted significant direct effects on students' academic achievement. This may be possible because teachers with many years of experience are more likely to be proficient in lesson planning, classroom management, diagnosing students' misconceptions and selecting instructional approaches that facilitate meaningful learning than those with fewer years. The stronger influence of homework and practice assignments may similarly be attributed to the opportunities they provide for continuous practice, reinforcement of classroom learning and independent application of geographical concepts.

The findings are consistent with that of Olatunji and Akinwale (2022), who reported that students taught by teachers with longer years of teaching experience significantly outperformed those taught by less experienced teachers. The finding also align with that of Black and Wiliam (2019) who found that students exposed to structured formative assessment practices achieved significantly higher academic performance than those taught using conventional assessment methods. Likewise, Ozan and Kincal (2021) found that classroom discussions, quizzes and performance tasks significantly improved students' achievement in Geography. In the same vein, Ajayi and Ogunyemi (2022) also found significant positive relationships between formative assessment practices, including homework, quizzes and classroom observation and students' academic achievement in Nigerian secondary schools. Additionally, they found that the combined use of formative assessment practices significantly enhanced students' learning outcomes.

The finding of this study also revealed that teachers' teaching experience exerted a statistically significant indirect effect on students' academic achievement in Geography through formative assessment practices, indicating that formative assessment practices significantly mediated the relationship between teachers' teaching experience and students' academic achievement. This finding may be explained by the fact that teachers who have accumulated years of classroom experience are generally more capable of selecting appropriate assessment strategies, interpreting students' responses, providing timely and constructive feedback, and adjusting instructional activities to address identified learning gaps. The relatively small magnitude of the indirect effect further suggests that although formative assessment practices constitute an important mediating pathway, teaching experience also influences students' achievement through other instructional processes not explicitly modelled in the present study. This finding corroborate with that of Sortwell, Trimble, and Geelan (2024), who submitted that the positive effects of formative assessment on academic achievement were enhanced by teachers' professional competence and instructional experience. Similarly, the finding to some extent add credence to Andor, Ukeh and Ugwu (2026) who found a significant indirect effect through teachers' experience to their readiness to adopt assessment strategies.

CONCLUSION

Based on the study's findings, it can be concluded that the parsimonious structural equation model explaining senior secondary school students' achievement in Geography comprises teachers' experience and formative assessment practices such as low-stakes quizzes and tests, exit slips, self-assessment, classroom discussions, performance tasks, feedback mechanisms, and homework/practice assignments. In addition, teachers' experience has significant direct influence on students' achievement in Geography, likewise the various formative assessment practices, with homework and practice assignments producing the strongest direct effect. In addition, teachers' experience indirectly influences students' achievement through formative assessment practices. Therefore, students' achievement in Geography is best understood as the outcome of the combined influence of teachers' experience and formative assessment practices operating through both direct and indirect pathways.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Regular workshops, seminars, mentoring programmes, and in-service training should be organised by the government for Geography teachers to enhance their teaching experience and formative assessment practices.
2. Geography teachers should be encouraged to regularly integrate diverse formative assessment practices during instruction to improve their students' achievement.
3. School administrators should ensure proper instructional supervision by monitoring teachers' implementation of formative assessment practices to ensure effective Geography teaching and learning.

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