Predictive Power of Students' Engagement on Academic Achievement in Colleges of Education in North East Nigeria

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Abstract
Public concern regarding the quality of graduates from Colleges of Education in North East Nigeria has increased due to declining academic achievement and rising late graduation rates. This situation is further exacerbated by a surge in student enrollment amidst inadequate infrastructure and limited resources, which can result in decreased student engagement—a critical factor for effective learning. To this end, this study investigates the predictive power of students' engagement on academic achievement in Colleges of Education in North East Nigeria. Using the Cochran sample size formula, 952 students were sampled from a population of 8,761 NCE II students across four institutions. Data were collected with a 30-item "College Students' Engagement Questionnaire" (CSEQ) and a "College Students' Proforma" (CSP). Descriptive statistics of mean and standard deviation, Simple and Multiple Linear Regression, were employed for data analysis at a 0.05 alpha level. Findings revealed moderate levels of cognitive engagement (Grand mean = 3.31), affective engagement (Grand mean = 3.25), and behavioural engagement (Grand mean = 3.14) and moderate levels of overall engagement across the three dimensions (Grand mean = 3.23) among students. Students' Engagements (Cognitive, affective, and behavioural) individually and jointly significantly predicted academic achievement (R^2 = 14.9%, $F(3, 948)$ = 55.319, p = 0.00 < 0.05). Based on these findings, the study recommended that Colleges of Education should design and implement integrated strategies that simultaneously address cognitive, affective, and behavioural engagements. Fostering comprehensive student engagement is needed to enhance academic outcomes in Colleges.

Keywords: Predictive Power, Students' Engagement, Academic Achievement.

Introduction

One of the primary objectives of teaching and learning is to ensure the holistic development of the learner. This is achieved when learning leads to a lasting change in learners' behaviour, measured by academic achievement. To meet curriculum goals, there must be continuous engagement between the teacher, learners, and the curriculum. Any lapse in this engagement can create a disconnect, making teaching and learning seem like mere routines rather than activities that impart knowledge, skills, and values. The increasing enrollment of student-teachers in Colleges of Education in North East Nigeria, coupled with overstretched manpower and infrastructural facilities, has widened the engagement gap between teachers, students, and the curriculum, resulting in low academic achievement and graduation rates. The constructivist approach, which underpins engagement theory, posits that students who are actively involved in their learning are more likely to understand concepts than those who remain passive (Fredricks, Blumenfeld & Paris, 2004). Unfortunately, in the case of student-teachers in North East Nigeria, there is an increasing dominance of lecturers with minimal student participation during lessons. The teacher's role is crucial in enhancing student engagement (Appleton, Christenson, Kim, & Reschly, 2006; Dalun et al., 2011). However, without an enabling environment, it is challenging for teachers to engage students intellectually, socially, and emotionally.

The academic achievement of student-teachers in Colleges of Education is a crucial factor that determines the quality of future educators and, consequently, the effectiveness of the educational system as a whole. As the bedrock of teacher training, these institutions are responsible for equipping student teachers with the necessary knowledge, skills, and attitudes to excel in their teaching careers. High academic achievement in this context not only reflects the proficiency of the student teachers but also serves as an indicator of the robustness of the teacher education programmes. Despite the vital role of Colleges of Education, there is growing concern over the academic achievement of student teachers in these institutions. Scholars (Olufemi, Adediran & Oyediran, 2018; Hayatu & Abubakar, 2019) have consistently reported declining academic achievement in Nigerian Colleges of Education, a concern for education stakeholders since teachers are pivotal in implementing the curriculum.

Akerele, Awoyemi, and Ogunniyi (2022) reported results from five conventional Federal Colleges of Education across Southern Nigeria, showing that 4.9% of students performed excellently, 53.7% indicated good performance, and 41.5% indicated average performance. In the North Central Zone of Nigeria, Aernyi and Odeh (2017) analyzed the results of 3,800 students from five departments in seven Colleges of Education, reporting that between the 2011/2012 and 2015/2016 academic sessions, 43.2% of students admitted during this period failed. On average, 1.2% of the total enrollment had distinctions, 7.7% passed at a credit level, 24.2% achieved merit, 16.2% had a pass, and 5.1% had a lower pass. In summary, out of 7,199 students admitted, only 3,937 graduated, while 3,937 did not. Similarly, Dowu (2013) analyzed the academic achievement of 600 students from six colleges of education in Southwestern Nigeria, finding that 0.2% of respondents received a failure grade (F), 3% were in grade E, 33.8% were in grade D, 55% were in grade C, and 5.7% were in grade B.

Recent data indicates that graduate teachers from higher institutions in North East Nigeria, particularly from Colleges of Education, have been underperforming in their assignments

(Farauta & Amuche, 2013; Olatunji, Aghimien, Oke & Olushola, 2016). Farauta and Amuche (2013) noted that the quality of graduate teachers raises fundamental questions about the training process. Negative reports on students' teaching practices in Nigerian tertiary institutions compound the issue. Akpochafo and Filho (2008) argued that students in Nigerian higher institutions are not committed to academics and avoid the rigors of college life. Similarly, Ebisine (2014) reported prevalent academic failure in Nigerian colleges of education. Statistics from studies conducted particularly in the Northeast, reveal low academic achievement among college students. For example, a study by Yahya, Garuba, Ibrahim, and Idris (2019) at Kwara State College of Education (Technical), Lafiagi, involving 200 NCE II students from vocational and technical education, found that 51.33% of the students scored between letter grades D and F. These statistics highlight the pressing issue of low academic achievement in Nigerian Colleges of Education, underscoring the need for urgent intervention to improve the quality of education and support student success. This raises the question: what contributes to the low achievement of students and graduates from these colleges?

Academic achievement is influenced by multiple factors, including institutional, teacher-related, student-related, and parent-related variables. Various studies and reports have highlighted significant challenges, including inadequate resources, overcrowded classrooms, and limited access to modern teaching tools, which adversely affect students' academic outcomes. Additionally, the engagement level between teachers, students, and the curriculum has been identified as a pivotal factor influencing academic success.

Student engagement is a critical issue for educators. Disengagement from classroom activities significantly impacts students' poor performance in college (Conner, 2016). Without engagement, student-teachers may withdraw socially, cognitively, and physically from the learning process. This withdrawal has significant costs for Nigeria, including unproductive citizenship and manpower shortages, especially at the primary and secondary school levels. Even worse, college dropouts are at risk of unemployment and incarceration, placing additional burdens upon themselves and society (Conner, 2016).

Student engagement refers to the active involvement of students in educational practices that are effective and their dedication to educational goals and learning. This engagement is a crucial pathway to achieving highly valued outcomes such as academic achievement (Christenson, Reschly, & Wylie, 2012). It is defined as the time and energy students invest in educationally sound activities both inside and outside the classroom, along with the institutional policies and practices that encourage students to participate in these activities (Kuh, 2003). Similarly, the National Survey of Student Engagement (NSSE®, 2017) describes engagement as the amount of time and effort students dedicate to their studies and educational activities, and the efforts made by institutions to involve students in learning activities. These definitions highlight that student engagement is not solely the responsibility of teachers but also the school.

Gunuc and Kuzu (2014), along with Sukor, Ayub, Mahmud, and Halim (2021), describe engagement as the quality and quantity of students' psychological, cognitive, emotional, and behavioural responses to the learning process, as well as to academic and social activities both in and out of the classroom. It is best understood as a relationship between the student and the

school, teachers, peers, instruction, and curriculum (Delfino, 2019). Hypothetically, student-teachers who are not properly engaged in their learning activities may face a higher risk of failure and delayed graduation. Thus, student engagement is considered a vital component of learning environments and a significant predictor of student retention and academic success (Chen, Gonyea, & Kuh, 2008; Kuh, 2009).

Colleges of education are currently facing a crisis in terms of retention and graduation rates (Yazzie-Mintz, 2006). Barton (2005) noted that the high school dropout rate is the result of a long-term disengagement process that begins in the earliest grades. Conner (2016) also observed that many college students are inattentive or disruptive in the classroom, do not participate in the curriculum, and show low levels of motivation and interest, leading to their social and physical withdrawal from school. Students who remain engaged in the teaching-learning process are less likely to graduate late, perform poorly, or drop out of school. However, disengagement in schools remains a significant issue, suggesting an "engagement gap" among students (Yazzie-Mintz, 2006; Conner, 2016).

The current emphasis on student engagement in educational systems is well-reported, given that previous research has established its significant role in promoting students' academic achievement (Fredricks et al., 2004; Dotterer & Lowe, 2011). Students' engagement positively influences their feelings toward school (Mandernach, 2009). Without a sense of engagement, student-teachers are likely to lose interest in their studies. Therefore, student engagement is a critical factor that directly and indirectly affects learning achievement, shaping relationships among students, teachers, and the curriculum (Dotterer & Lowe, 2011; Furrer & Skinner, 2003). This study will thus focus on three dimensions of student engagement—cognitive (intellectual), affective (emotional), and behavioural—and their relevance to learning achievement.

Cognitive engagement refers to the mental effort students invest in completing learning tasks, using sophisticated rather than superficial strategies. This involves the cognitive functions active in a student's learning process. Kong, Wong, and Lam (2003) identified several indicators of cognitive engagement: surface strategies (memorization and practice), deep strategies (understanding, summarizing, and connecting new knowledge with prior knowledge), and reliance on parents and teachers. Cognitive engagement describes the degree of concentration on a task, with unengaging lessons often leading to students' minds wandering. Learners may struggle to see the relevance of lessons if they cannot connect the material to their lives. In classroom learning, task difficulty is positively associated with cognitive engagement (Shernoff, 2013). Furthermore, Gunuc (2014) found a strong positive relationship between cognitive engagement and academic achievement. It is expected that college students who are cognitively immersed in their learning activities will achieve higher academic success than those who are not. The question remains: Will cognitive engagement correlate with the academic achievement of College of Education students in North East Nigeria?

Based on cognitive and constructivist ideas, making learning relevant and scaffolding students to higher levels of thinking ensures they adapt their learning to various situations, keeping them engaged and improving their behavioural engagement (Li & Lerner, 2013). Behavioural engagement is defined as learners' involvement in learning and academic tasks, which includes

effort, persistence, attention, class participation, and asking questions. It also encompasses participation in school-related activities, obeying school rules, regular attendance, adherence to norms, and avoiding disruptive behaviours (Ainley, Frydenberg & Russell, 2005). Behavioural engagement captures how students interact within the school setting through academic and non-academic activities, essentially representing "engagement in the life of the school." Actively engaged students respond to learning tasks by asking relevant questions, solving task-related problems, and participating in discussions with peers and teachers. School attendance rates are a key factor in behavioural engagement, highly predictive of non-school completion. Behaviourally engaged students identify with the school, often arriving early and attending classes regularly. Studies show that study techniques tailored to students' needs increase attendance, study frequency, information retention, and consistency in completing assignments (Fredricks et al., 2004; Reschly et al., 2014). However, a negative relationship between behavioural engagement and academic achievement among college students was observed (Kim & Seo, 2015; Schneider & Preckel, 2017).

Emotions are a critical component of student engagement, encompassing affective reactions in the classroom such as happiness, interest, boredom, anxiety, frustration, and sadness (Vaughn, 2014). Students exhibit emotional engagement through their positive or negative responses to learning activities. Ideally, learners would prefer to experience positive emotions with their teachers and peers, fostering motivation, engagement, and learning. Engaged students tend to be happier compared to those who are disconnected, as engagement activates more pleasure centres in the brain than simple memorization tasks (Jenson, 2005; Conner, 2016). Furthermore, Herreid, Terry, Lemons, Armstrong, Brickman, and Ribbens (2014) found a significant correlation between emotional engagement and learning gains. However, Gunuc (2014) observed a weak relationship between emotional engagement and academic achievement. It would thus be interesting to investigate how emotional engagement correlates with college students' outcomes in North East Nigeria.

Lecturers in higher education institutions increasingly face challenges in effectively engaging students. Engagement offers numerous benefits, including reduced student lethargy and enhanced learning (Fredricks et al., 2004). By understanding student engagement, how students learn, and when they become disengaged, educators can implement strategies and instructional practices to enhance engagement. Consequently, keeping students engaged can improve their achievement and close the engagement gap, which is critical for the goals of teacher education programs. The inconsistencies in previous reports and the lack of data in the study area highlight the need for more research on student engagement. Additionally, growing concerns about understanding how student-teachers learn and the need to adapt academic practices in colleges of education to meet learners' needs necessitate this study. Expanding research on student engagement factors among students in North East Nigeria's Colleges of Education can improve their learning and academic achievement, aiding the production of quality manpower essential for nation-building.

Statement of the Problem
Concerns have been raised regarding the declining quality of graduates from Colleges of Education in North East Nigeria, characterized by a high rate of late graduation (Olufemi et al., 2018; Hayatu & Abubakar, 2019). This trend, attributed in part to low student engagement

(Fredricks et al., 2004), raises serious concerns for stakeholders in the education sector (Olatunji et al., 2016).

Effective learning hinges on student engagement, encompassing cognitive, affective, and behavioural aspects. Without active and meaningful student engagement, teaching and learning become a mere exercise in certification rather than a transformative process (Hargreaves, 2006; Carpenter, 2010; Perry, 2022). In many lecture theatres within Nigerian higher education institutions, there is little room for adequate student engagement. Without sufficient cognitive, affective, and behavioural engagement, meaningful learning is unlikely to occur. Traditional lecture-based instruction, a commonly used method of teaching in higher institution may not adequately engage students, leading to boredom, decreased attention, and ultimately, suboptimal learning outcomes. This is particularly concerning given the critical role of teacher education in shaping the future of the Nigerian education system.

Nigeria aspires to excel in all areas, and the pivotal role of teachers in building a solid foundation for this ambition is unquestionable. Therefore, it is essential to understand how student-teachers in colleges of education are being trained and how they are acquiring their knowledge and skills. To this end, this study investigated the predictive power of student engagement (cognitive, affective, and behavioural) on academic achievement in Colleges of Education in North East Nigeria. By understanding the factors influencing student engagement, this research seeks to contribute to improving the quality of teacher education in the region and ultimately, enhance the overall quality of education in Nigeria.

Purpose of the Study
The purpose of this study is to investigate the predictive power of students' engagement on academic achievement in Colleges of Education in North East Nigeria. Specifically, the objectives of this study are to determine whether:
  i.   Students' cognitive engagement predicts academic achievement in Colleges of Education in North East Nigeria.
 ii.   Students' affective engagement predicts academic achievement in Colleges of Education in North East Nigeria.
iii.   Students' behavioural engagement predicts academic achievement in Colleges of Education in North East Nigeria.
 iv.   Students' engagement (cognitive, affective & behavioural) predicts academic achievement in Colleges of Education in North East Nigeria.

Research Questions
This study was guided by the following research questions:
1.   What is the level of students' cognitive engagement in Colleges of Education in North East Nigeria?
2.   What is the level of students' affective engagement in Colleges of Education in North East Nigeria?
3.   What is the level of students' behavioural engagement in Colleges of Education in North East Nigeria?
4.   What is the level of students' engagement (cognitive, affective, & behavioural) in Colleges of Education in North East Nigeria?

Hypotheses

The following null hypotheses guided this study.

H0₁: Cognitive engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

H0₂: Affective engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

H0₃: Behavioural engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

H0₄: Students' engagement (cognitive, affective & behavioural) do not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

Materials and Methods

Research Design

The research design selected for this study is a Correlational Survey Research Design. This design is well-suited for examining the relationships between multiple variables within a large sample. It enables the analysis of how different types of student engagement (cognitive, affective, and behavioural) are related to academic achievement in a real-world setting.

Recent studies support the choice of this design. For instance, Wong and Kassab (2024) utilized a correlational survey design to explore the links between student engagement dimensions and academic achievement. Similarly, Salah, Kassab and Hayam-Jonas (2024) investigated student engagement in health education using a correlational design to examine how engagement correlates with academic performance. Hayam-Jonas (2016) also emphasized the effectiveness of correlational survey designs in understanding the simultaneous relationships of various engagement domains on academic achievement.

This design is particularly suitable for the study as it allows for the identification and quantification of relationships between student engagement and academic achievement. The use of statistical techniques such as simple and multiple regression analysis provides a clear picture of how different engagement aspects contribute to academic outcomes. This approach offers robust statistical power, making it possible to determine the strength and direction of relationships between the independent and dependent variables.

Population, Sample and Sampling Techniques

The study population comprised NCE II students from Colleges of Education located in Adamawa, Bauchi, Gombe, and Yobe States. According to available statistics, there were 8,761 NCE II students registered for the 2022/2023 academic session. The rationale for selecting NCE II students is their two years of academic exposure. These students are generally considered more stable and experienced in terms of their engagement levels, compared to NCE I students who are still acclimating to college academics, and NCE III students who are often away on teaching practice in various secondary schools.

The sample size for this study is 952 NCE II students from the four institutions. The multi-stage sampling technique at three levels will be employed in the study. This sample size was computed using the Cochran (cited in Cohen, Manion & Morrison, 2011) sample size formula for a finite population. The sample size (n) was calculated according to the formula: $n = [z^2 *$

p * (1 - p) / e2] / [1 + (z^2 * p * (1 - p) / (e^2 * N))] Where: z = 1.96 for a confidence level (α) of 95%, p = proportion (expressed as a decimal), N = population size, e = margin of error.

To ensure a representative sample of 952 students across the four Colleges of Education, a proportional sampling method was employed. This method computes the sample size for each institution based on its respective population within the overall target population. For example, in the Federal College of Education, Yola, with 2,027 NCE II students, the proportion of the total population was calculated, and the corresponding sample size was determined. This process was repeated for each of the four institutions, resulting in a sample size of 220 students from Yola, North East Nigeria, 245 students from Azare, Bauchi State, 251 students from Potiskum, Yobe State, and 236 students from Gombe State. This proportional sampling method ensures that the sample accurately reflects the population distribution across the four institutions, thereby enhancing the generalizability of the research findings.

Research Instrument
The students' engagement was measured using the adapted "College Students' Engagement Questionnaire" (CSEQ). This instrument was an adapted version of Fredericks et al. (2004) Students' Engagement Questionnaire. The CSEQ consisted of Sections A and B. Section A elicited information on the personal data of the students, such as the name of the school and students' registration numbers, to assist the researcher in identifying the results of respondents.

Section B contained 30 items on students' engagement, divided into three clusters. Each cluster included 10 items that gathered information on each dimension of students' engagement: cognitive, affective, and behavioural. The items in clusters one to three of Section B were structured on a five-point rating scale: Very High Level (VHL) 5, High Level (HL) 4, Moderate Level (ML) 3, Low Level (LL) 2, and Very Low Level (VLL) 1.

The Cumulative Grade Point Average (CGPA) of students was collected using a pro forma labelled "College Students Proforma (CSP)," which served as a measure of students' academic achievement. The pro forma was designed with six columns: Serial number, College, Department, Registration number, CGPA, and Remark.

Validation of the Instrument
To ensure validity, the CSEQ was subjected to face and construct validation by three experts specializing in Curriculum and Instruction, Educational Management, and Educational Psychology. Face validation involved the experts' assessment of whether the instrument accurately measured its intended construct (students' engagement) and the relevance of the items to the target sample. Construct validation focused on determining the extent to which the questionnaire accurately assessed all dimensions of students' engagement. Each expert meticulously examined the items for their alignment with the instrument's purpose, objectives, research questions, and hypotheses. All feedback and recommendations from the experts were thoroughly considered and incorporated into the final version of the instrument.

Reliability of the Instrument
To assess the reliability of the College Students Engagement Questionnaire (CSEQ), a pilot test was conducted on a representative sample of 50 students from the College of Education (COE) Zing, Taraba State, a population excluded from the main study. Cronbach Alpha, a suitable statistical method for analyzing ordinal data (Bonett & Wright, 2015) and consistent

with the Likert scale used in the CSEQ, was employed to assess the instrument's internal consistency. The analysis yielded a Cronbach Alpha coefficient of 0.86. This coefficient exceeds the generally accepted threshold (Babbie, Halley & Zaino, 2003), indicating that the CSEQ exhibits adequate internal consistency and was suitable for measuring students' engagement in this study.

Data Analysis

Descriptive statistics, specifically mean and standard deviation were employed to answer research questions One to Four. The interpretation of the items in these research questions will be guided by the following real limits of numbers: Very High Level (VHL) ranging from 4.50-5.00, High Level (HL) from 3.50-4.49, Moderate Level (ML) from 2.50-3.49, Low Level (LL) from 1.50-2.49, and Very Low Level (VL) from 0.50-1.49. To test null hypotheses One to Three, the simple linear regression statistic was used, while Multiple Linear Regression was applied to test null hypothesis Four at a 0.05 alpha level. All data were analyzed using the Statistical Package for Social Science (SPSS), version 25.

Results

Research Question One: What is the level of students' cognitive engagement in Colleges of Education in North East Nigeria?

To address this research question, the responses from students regarding their level of affective cognitive engagement in learning at Colleges of Education were analyzed. Descriptive statistics of mean and standard deviation were utilized for this analysis. The results are detailed in Table 1.

Table 1: Summary of Mean and Standard Deviation of Students' Cognitive Engagement in Colleges of Education

S/No	Cognitive Engagement N = 952	Mean	SD	Remark
1.	I prefer course materials that intellectually challenge me and help me learn new things.	3.42	1.26	ML
2.	I connect new learning to my prior knowledge.	3.33	1.09	ML
3.	I apply what I learn in class to real-life situations.	3.16	1.13	ML
4.	I explore different ways to solve problems.	3.52	1.19	HL
5.	I try to understand my mistakes when I get something wrong.	3.56	1.17	HL
6.	I focus on studying the easy parts of the material and avoid the difficult sections.	3.06	1.42	ML
7.	I put minimal effort into understanding my course materials.	3.12	1.17	ML
8.	I do not use my study time effectively to gain knowledge.	3.22	1.36	ML
9.	I read my course materials multiple times until I understand them.	3.51	1.34	HL
10.	I check my schoolwork for any mistakes.	3.22	1.43	ML
	Grand Mean	**3.31**	**1.26**	**ML**

The analysis of cognitive engagement among students in Colleges of Education provides crucial insights. Students show a moderate level of preference for intellectually challenging course materials, with a mean score of 3.42 (SD = 1.26). This indicates that while they are somewhat interested in challenging academic content, there is potential for greater intellectual engagement. Similarly, students demonstrate a moderate level of success in connecting new learning to their prior knowledge, with a mean score of 3.33 (SD = 1.09), highlighting the importance of building on existing knowledge for deeper understanding and retention.

When it comes to applying what is learned in class to real-life situations, students exhibit a moderate level of engagement, indicated by a mean score of 3.16 (SD = 1.13). This suggests that while they recognize the relevance of their studies, there is potential for more practical applications. Additionally, students show a high level of engagement in exploring different ways to solve problems, with a mean score of 3.52 (SD = 1.19), reflecting active involvement in problem-solving and critical thinking.

Understanding mistakes is a strong area, with students showing a high level of commitment to learning from their errors, as indicated by a mean score of 3.56 (SD = 1.17). However, students also tend to focus on studying only the easy parts of the material and avoid challenging sections, with a mean score of 3.06 (SD = 1.42), which may hinder overall learning and engagement. There is a moderate level of minimal effort in understanding course materials, with a mean score of 3.12 (SD = 1.17). This suggests that while some students may not fully invest their effort, there is a need to cultivate a more proactive approach to studying. Similarly, students moderately acknowledge ineffective use of their study time, with a mean score of 3.22 (SD = 1.36), highlighting inefficiencies in study habits that can negatively impact academic performance.

On a positive note, students show a relatively high level of dedication to understanding their materials through repeated reading, as indicated by a mean score of 3.51 (SD = 1.34). This practice demonstrates a commitment to achieving thorough comprehension. Lastly, the mean score of 3.22 (SD = 1.43) for checking schoolwork for mistakes suggests a moderate level of consistency in reviewing work for errors, which is important for maintaining academic quality. Overall, the grand mean of 3.31 (SD = 1.26) for cognitive engagement in Colleges of Education suggests that students generally exhibit a moderate level of cognitive engagement in their academic activities.

Research Question Two: What is the level of students' affective engagement in Colleges of Education in North East Nigeria?

To answer this research question, students' responses regarding their level of affective engagement in learning at Colleges of Education were analyzed using descriptive statistics, specifically mean and standard deviation. The resulting data, summarized in Table 2, provides insights into the extent to which students exhibit affective engagement in their learning experiences.

Table 2: Summary of Mean and Standard Deviation of Students' Affective Engagement in Colleges of Education

S/No	Affective Engagement N = 952	Mean	SD	Remark
1.	I enjoy learning new things.	3.47	1.27	ML
2.	I feel good during lectures.	3.48	1.46	ML
3.	Lectures feel boring to me.	3.27	1.61	ML
4.	I have fun in class.	3.26	1.19	ML
5.	I am confident that I can learn and excel in my courses.	3.37	1.34	ML
6.	I feel frustrated with learning.	3.43	1.31	ML
7.	I do not care about studying in school.	2.27	1.37	LL
8.	I feel safe during lectures.	3.40	1.47	ML
9.	I find it difficult to work with my classmates.	3.25	1.36	ML
10.	I feel comfortable discussing my problems with my lecturers.	3.31	1.42	ML
	Grand Mean	**3.25**	**1.38**	**ML**

Table 2 summarizes the mean scores and standard deviations for various aspects of students' engagement, specifically focusing on affective engagement. The statement I enjoy learning new things has a mean score of 3.47 (SD = 1.27), indicating that students generally find enjoyment in acquiring knowledge, though improvements could enhance educational experiences. Similarly, I feel good during lectures scored 3.48 (SD = 1.46), reflecting a positive emotional response, but the variability suggests some students may not feel the same.

The mean score of 3.27 (SD = 1.61) for lectures that feel boring to me shows that while most students do not find lectures dull, a notable segment still does, pointing to a need for pedagogical improvement. The score of 3.26 (SD = 1.19) for I have fun in class suggests opportunities to enhance interactive teaching methods to boost engagement further.

Students reported a mean score of 3.37 (SD = 1.34) for confidence in learning, indicating a moderate level of self-efficacy, essential for academic success. However, the variability suggests that some students may require additional support. The mean score of 3.43 (SD = 1.31) for frustration indicates that addressing the causes of this frustration is crucial for improving engagement.

A concerning mean score of 2.27 (SD = 1.37) for I do not care about studying in school suggests a significant lack of motivation among some students, necessitating targeted interventions. Additionally, the mean score of 3.25 (SD = 1.36) for collaboration indicates challenges in teamwork, highlighting the need for strategies to foster collaboration skills. A mean score of 3.31 (SD = 1.42) for comfort in discussing problems with lecturers suggests that students generally feel at ease communicating with faculty, which is vital for enhancing the learning experience. In summary, the grand mean of 3.25 (SD = 1.38) reveals a moderate affective engagement among students in Colleges of Education, indicating areas needing attention and improvement to enhance their academic experiences.

Research Question Three: What is the level of students' behavioural engagement in Colleges of Education in North East Nigeria?

To answer this research question, students' responses regarding their level of behavioural engagement were analyzed using descriptive statistics, specifically mean and standard deviation. Table 3 presents the results of this analysis.

Table 3: Summary of Mean and Standard Deviation of Students' Behavioural Engagement in Colleges of Education

S/No	Behavioural Engagement N = 952	Mean	SD	Remark
1.	I listen carefully to the lecturer during lectures.	3.45	1.28	ML
2.	I have difficulty getting along with other students.	3.54	1.43	ML
3.	I skip classes during school hours.	2.76	1.40	ML
4.	I find it hard to pay attention in class.	3.12	1.44	ML
5.	I participate actively in group discussions.	3.42	1.34	ML
6.	I complete my assignments on time.	3.40	1.38	ML
7.	I easily give up when a course material is difficult.	2.94	1.38	ML
8.	I avoid attending lectures.	2.76	1.59	ML
9.	I follow classroom rules.	3.68	1.35	HL
10.	I study regularly.	2.35	1.39	LL
	Grand Mean	**3.14**	**1.39**	**ML**

Table 3 outlines the mean scores and standard deviations for different facets of students' behavioural engagement in Colleges of Education. Students exhibit a moderate to high level of attentiveness during lectures, as indicated by a mean score of 3.45 (SD = 1.28). This suggests that most students listen carefully, although some variability exists, with a portion struggling to maintain focus. The mean score of 3.54 for getting along with other students reflects a high level of social engagement, indicating that students generally find it easy to collaborate with peers. However, the higher standard deviation of 1.43 implies that some students experience significant challenges in social interactions.

With a mean score of 2.76 (SD = 1.40), students demonstrate a moderate level of class attendance, suggesting that while many are committed to attending lectures, some do skip classes, which may hinder their academic progress. The mean score of 3.12 for paying attention in class indicates a moderate level of attention, signifying that while many students can focus, a notable number struggle with distractions, as echoed by the higher standard deviation of 1.44.

Students show a moderate level of participation in group discussions, with a mean score of 3.42 (SD = 1.34). This indicates active engagement in collaborative learning, although the standard deviation suggests variability in participation levels. A mean score of 3.40 for completing assignments on time shows a moderate level of commitment, indicating that most students are likely meeting deadlines, but some may struggle with time management, as shown by the standard deviation of 1.38.

The mean score of 2.94 for resilience when faced with difficult material suggests a moderate level of persistence, indicating that while most students do not easily give up, some may feel overwhelmed. A mean score of 2.76 for avoiding lectures indicates a moderate level of engagement, suggesting that students generally attend classes, though the substantial standard deviation of 1.59 reveals that a significant number may choose to skip lectures.

The mean score of 3.68 for following classroom rules indicates a high level of adherence, which is crucial for maintaining a positive learning environment. However, the standard deviation of 1.35 suggests that while most students comply, some may not. The low mean score of 2.35 for studying regularly mirrors a low level of consistent study habits among students, raising concerns about academic preparedness, as indicated by the standard deviation of 1.39. The grand mean of 3.14 (SD = 1.39) showed a moderate level of behavioural engagement among students in Colleges of Education.

Research Question Four: What is the level of students' engagement (cognitive, affective, & behavioural) in Colleges of Education in North East Nigeria?

Students' engagement levels, encompassing cognitive, affective, and behavioural dimensions, were analyzed using descriptive statistics (mean and standard deviation). The results of this analysis are presented in Table 4.

Table 4: Summary of Mean and Standard Deviation of Students' Behavioural Engagement in Colleges of Education

Student Engagement	N = 952	Mean	SD	Remark
Cognitive Engagement		3.31	1.26	ML
Affective Engagement		3.25	1.38	ML
Behavioural Engagement		3.14	1.39	ML
Grand Mean		**3.23**	**1.34**	**ML**

Table 4 summarizes the mean scores and standard deviations for cognitive, affective, and behavioural engagement among students in Colleges of Education. Cognitive engagement has a mean score of 3.31 (SD = 1.26), indicating a moderate level of intellectual investment. This suggests that students are generally willing to engage deeply with the material, though the variability indicates some may not be as involved in their learning.

Affective engagement scores a mean of 3.25 (SD = 1.38), showing a moderate emotional investment. This suggests that students typically feel positive about their learning environment, but the higher standard deviation points to differing emotional responses, with some experiencing challenges that could affect their motivation. Behavioral engagement shows a mean of 3.14 (SD = 1.39), indicating moderate participation in academic activities. While many students adhere to classroom expectations, the variability suggests that some may not be as actively engaged, potentially impacting their academic success.

The grand mean of 3.23 (SD = 1.34) proves an overall moderate level of engagement across all dimensions. This variability highlights the need for targeted strategies to enhance engagement, particularly for students who may struggle with cognitive, affective, or behavioural aspects of their education.

H0_1: Cognitive engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

The hypothesis was tested by correlating the mean responses of 952 students on Cognitive engagement with academic achievement using simple linear regression statistic. The result is illustrated in Tables 5A, 5B and 5C respectively.

Table 5A: Model Summary of Regression Analysis of Prediction between Students' Cognitive Engagement and Academic Achievement

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.261[a]	.068	.067	1.55969

Table 5A reveals a weak positive correlation (R = 0.261) between cognitive engagement and academic achievement of students. While this indicates a moderate association, the R-squared value of 0.068 suggests that only 6.8% of the variance in academic achievement of students can be attributed to cognitive engagement. The adjusted R-squared value of 0.067 further emphasizes the limited explanatory power of the model, indicating that other factors significantly contribute to academic achievement. Overall, this indicates that the model has a relatively weak predictive power, suggesting that higher cognitive engagement may slightly improve academic performance. Table 5B shows whether this R-squared value is significant or not.

Table 5B: Summary of Regressed ANOVA of Prediction between Students' Cognitive Engagement and Academic Achievement

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.322	1	168.322	69.194	.000[*]
	Residual	2310.989	950	2.433		
	Total	2479.311	951			

*Significant; $p < 0.05$.

Table 5B presents the results of the ANOVA analysis conducted to examine the predictive power of cognitive engagement on academic achievement of college students. The regression model was found to be statistically significant ($F_{(1, 950)} = 69.194$, $p = 0.000 < 0.005$), indicating that cognitive engagement significantly predicts students' academic achievement. Table 5C is presented to throw more light on these data.

Table 5C: Coefficients of Prediction between Students' Cognitive Engagement and Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	6.206	.380		16.330	.000*
Cognitive Engagement	.946	.114	.261	8.318	.000*

*Significant; $p < 0.05$.

Table 5C presents the regression coefficient indicating that cognitive engagement significantly predicts students' academic achievement (Beta = 0.261, [26.1%], t = 8.318, $p = 0.000 < 0.05$). The moderate predictive power of this relationship, suggest that higher levels of cognitive engagement are associated with higher levels of academic achievement.

H0₂: Affective engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

The mean responses of 952 students on affective engagement with academic achievement were correlated using simple linear regression statistic. The result is summarized in Tables 6A, 6B and 6C respectively.

Table 6A: Model Summary of Regression Analysis of Prediction between Students' Affective Engagement and Academic Achievement

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.275[a]	.076	.075	1.55328

Table 6A presents the statistics of the regression model examining the predictive power of affective engagement on academic achievement. The correlation coefficient (R) of 0.275 indicates a weak positive relationship. However, the R-squared value of 0.076 suggests that only 7.6% of the variation in academic achievement of students can be explained by affective engagement. This indicates that while affective engagement contributes to academic academic achievement of students, it is not the sole determinant. The adjusted R-squared value of 0.075 further emphasizes the limited explanatory power of the model. Table 6B throw shed more light on this.

Table 6B: Summary of Regressed ANOVA of Prediction between Students' Affective Engagement and Academic Achievement

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	187.258	1	187.258	77.614	.000*
Residual	2292.053	950	2.413		
Total	2479.311	951			

*Significant; p < 0.05.

The ANOVA results in Table 5B show that affective engagement significantly predicts academic achievement of students (F (1, 950) = 77.614, p = 0.000 < 0.005). This implies that as students' affective engagement improves, academic achievement improves correspondingly. Table 6C provides another emphasis on this result.

Table 6C: Coefficients of Prediction between Students' Cognitive Engagement and Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	5.832	.317		18.386	.000
Affective Engagement	.848	.096	.275	8.810	.000*

*Significant; p < 0.05.

Table 6C presents the regression coefficients indicating that affective engagement significantly predicts students' academic achievement (Beta = 0.275, [27.5%], t = 8.810, p = 0.000 < 0.05). The unstandardized coefficient (B = 0.848, Std. Error = 0.096) further reinforces the strength of this prediction. The strong predictive power of this relationship indicates that increased affective engagement is linked to higher academic achievement among students.

H0₃: Behavioural engagement does not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

This null hypothesis was tested by correlating the mean responses of the students on behavioural engagement with academic achievement (CGPA). The result is presented in Tables 7A, 7B and 7C respectively.

Table 7A: Model Summary of Regression Analysis of Prediction between Students' Behavioural Engagement and Academic Achievement

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.289ª	.083	.082	1.54675

Table 7A reveals that the correlation coefficient (R) of 0.289 indicates a weak positive relationship. However, the R-squared value of 0.083 suggests that only 8.3% of the variation in academic achievement of students can be explained by behavioural engagement. The adjusted R-squared value of 0.082 further emphasizes the limited explanatory power of the model. Table 7B shows more about the significant of the R^2 value.

Table 7B: Summary of Regressed ANOVA of Prediction between Students' Behavioural Engagement and Academic Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	206.488	1	206.488	86.308	.000*
	Residual	2272.823	950	2.392		
	Total	2479.311	951			

*Significant; $p < 0.05$.

The analysis in Tabe 7B shows that students' behavioural engagement significantly predicts their academic achievement in Colleges of Education (F (1, 950) = 86.308, p = 0.000 < 0.005). This data implies that, as students' behavioural engagement improves, academic achievement also improves correspondingly. The coefficient table as an offshoot of the regressed ANOVA is hereby presented.

Table 7C: Coefficients of Prediction between Students' Behavioural Engagement and Academic Achievement

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.931	.312		19.028	.000
	Behavioural Engagement	.909	.098	.289	9.290	.000*

*Significant; $p < 0.05$.

The coefficients in Table 7C further advance the results in Table 7B indicating that behavioural engagement had strong predictive power on academic achievement of college students (Beta = 0.289, [28.9%], t = 9.290, p = 0.000 < 0.05). The data further shows the strong predictive strength of the predictor on the outcome variable, meaning that as students' behavioural engagement improves, their academic achievement improves correspondingly.

H0₄: Students' engagement (cognitive, affective & behavioural) do not significantly predict students' academic achievement in Colleges of Education in North East Nigeria.

To test this null hypothesis, the mean response scores of students on each of the identified students' engagement variables (cognitive, affective & behavioural) were all together correlated with students' academic achievement using multiple linear regression. This is necessary to determine the contribution of each of the engagement variables in the study. The results are presented in Tables 8A, 18B and 8C respectively.

Table 8A: Model Summary of Multiple Regression Analysis of Prediction between Students' Engagement and Academic Achievement

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.386[a]	.149	.146	1.49187

Pearson's r 0.386 in Table 8A indicated a moderate, positive relationship between students' engagement and their academic achievement. Further, the coefficient of determination—R^2 = 0.149, indicated that 14.9% of the variation in students' academic achievement could be accounted for by their engagement (cognitive, affective & behavioural). After adjusting the R^2 value, the adjusted R^2 stood at 14.6%. Overall, this R^2 value suggested that students' engagement (predictors) predicted their academic achievement (outcome). Table 8B shows how significant the R^2 value is.

Table 8B: Summary of Regressed ANOVA of Prediction between Students' Engagement and Academic Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	369.369	3	123.123	55.319	.000[*]
	Residual	2109.941	948	2.226		
	Total	2479.311	951			

*Significant; $p < 0.05$.

Table 8B revealed how well the regression equation fits the data; the table indicated that the regression model related to the dependent variable significantly. This implied that students' engagement predicted their academic achievement (F (3, 948) = 55.319, p = 0.00 < 0.05). This affirms that the regression model is a good fit for the data. Table 8C is the coefficients table which provides the necessary information to predict academic achievement from students' engagement as well as determine the predictive strength of each component of students' engagement on the criterion variable.

Table 8C: Coefficients of Prediction between Students' Engagement and Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	8.958	.465		19.245	.000
Cognitive Engagement	.792	.110	.218	7.174	.000*
Affective Engagement	.511	.110	.166	4.625	.000*
Behavioural Engagement	.510	.114	.162	4.476	.000*

*Significant; $p < 0.05$.

Table 8C shows the contribution of each component of students' engagement to the predictive power obtained in Table 8A. Cognitive engagement had the highest predictive power, and thus contributed the highest to the model (β = [0.218 (21.8%)], t = 7.174, p = 0.000 < 0.05). Followed by Affective engagement (β = [0.166 (16.6%)], t = 4.625, p = 0.000 < 0.05); Behavioural engagement (β = [0.162, (16.2%)], t = 4.476, p = 0.000 < 0.05). Regardless, going by the overall result, it could be said that students' engagement significantly predicts students' academic achievement.

Summary of Findings
The following are the major findings of the study:

1. College students demonstrated a moderate level of cognitive engagement in their academic activities in Colleges of Education in North East Nigeria (Grand mean = 3.31). Cognitive engagement significantly predicts students' academic achievement in Colleges of Education (R^2 = 6.8%, F(1, 950) = 69.194, p = 0.000 < .005).
2. College students demonstrated a moderate level of affective engagement in Colleges of Education (Grand mean = 3.25). Affective engagement significantly predicts the academic achievement of students in Colleges of Education (R^2 = 7.6% F (1, 950) = 77.614, p = 0.000 < 0.005).
3. A moderate level of behavioural engagement was observed among students in Colleges of Education (Grand mean = 3.14). Behavioural engagement significantly predicts students' academic achievement in Colleges of Education (R^2 = 8.3% F (1, 950) = 86.308, p = 0.000 < 0.005).
4. Overall, College students demonstrated a moderate level of engagement across all dimensions (cognitive, affective & behavioural) (Grand mean = 3.23). Students' engagement jointly predicted academic achievement in Colleges of Education (R^2 = 14.9% F(3, 948) = 55.319, p = 0.00 < 0.05).

Discussion

Cognitive Engagement and Academic Achievement of Students in Colleges of Education
The study found that college students in North East Nigeria demonstrated a moderate level of cognitive engagement in their academic achievement. This level of cognitive engagement was shown to significantly predict students' academic achievement, indicating that higher cognitive engagement is associated with better academic outcomes. Supporting this finding, Alonso-Tapia, Merino-Tejedor, and Huertas (2023) found that cognitive engagement significantly predicts academic achievement in various learning situations and contributes to academic

satisfaction. Similarly, Schnitzler, Holzberger, and Seidel (2020), Fuerters et al. (2023) found that cognitive engagement significantly predicts academic achievement.

Some studies present contradictory evidence for this finding. For instance, Hao Lei, Cui, and Zhou (2018) found that while there is a positive correlation between overall student engagement and academic achievement, the strength of the relationship varied based on factors such as cultural values and gender. Moreover, Çali (2024) discovered that cognitive engagement was not a significant predictor of academic achievement. Bircan (2015) reported a weak link between cognitive engagement and academic performance, while Brallier (2020) found that cognitive engagement did not uniquely predict overall college GPA.

Affective Engagement and Academic Achievement of Students in Colleges of Education
The study found that college students in North East Nigeria exhibited a moderate level of affective engagement. This level of affective engagement significantly predicts students' academic achievement, indicating that an increase in affective engagement leads to a corresponding improvement in the academic achievement of students. The study showed that students who are emotionally engaged are more likely to exhibit sustained attention and perseverance in their studies, leading to higher academic achievement. Recent research supports these findings. For instance, Patrick, Ryan, and Kaplan (2023) reported that affective engagement, characterized by students' emotional responses and interest in their learning, significantly predicted academic achievement. Furthermore, Herreid et al. (2014) found a significant correlation between emotional engagement and learning achievement.

Contrarily, some studies present differing perspectives. Wang and Degol (2016) found that affective engagement alone did not predict academic achievement of students. More so, Gunuc (2014) observed a weak relationship between emotional engagement and academic achievement. Fredricks, Blumenfeld, and Paris (2004) reported that affective engagement did not significantly predict academic achievement. Olivier, et al. (2019) reported that emotional engagement among fifth graders was negatively associated with academic achievement.

Yang and Li (2022) found that affective engagement plays a significant role in academic performance, particularly in environments that foster positive teacher-student relationships and supportive learning communities. Engaged students tend to be happier compared to those who are disconnected, as engagement activates more pleasure centres in the brain than simple memorization tasks (Jenson, 2005; Conner, 2016). This could be attributed to the reason for the result obtained in the study.

Behavioural Engagement and Academic Achievement of Students in Colleges of Education
The study observed a moderate level of behavioural engagement among students in Colleges of Education. This level of behavioural engagement was found to be a significant predictor of students' academic achievement, indicating that increased participation, effort, and persistence in academic tasks are associated with improved academic outcomes. This finding emphasizes that students who demonstrate consistent attendance, active participation in class activities, and completion of assignments tend to achieve higher academic success. Buttressing this finding, a study by Appleton, Christenson, and Furlong (2008) found that behavioural engagement significantly predicts academic achievement. Correspondingly, Fredricks et al. (2004) found

that behavioural engagement, which includes behaviours such as effort, persistence, and participation, is strongly correlated with academic achievement.

Conversely, Kim and Seo (2015), Schneider and Preckel (2017) found a negative relationship between behavioural engagement and academic achievement among college students Schneider & Preckel, 2017). Finn and Zimmer (2012) argued that while behavioural engagement is important, it may not be the sole predictor of academic success. Wang and Eccles (2013) found that the influence of behavioural engagement on academic achievement might vary based on individual differences and contextual factors. Lawson and Lawson (2013) discovered that while behavioural engagement is essential, its impact is most pronounced when combined with the engagement component.

Joint Contributions of Students' Engagement (Cognitive, Affective & Behavioural) Engagement on Academic Achievement in Colleges of Education
The study's finding revealed that college students in North East Nigeria demonstrated a moderate level of engagement across cognitive, affective, and behavioural dimensions. These combined engagement variables significantly predicted students' academic achievement. This implies that higher levels of holistic engagement, encompassing cognitive, affective, and behavioural dimensions, are associated with improved academic outcomes. Thus, the combined engagement across cognitive, affective, and behavioural dimensions suggests that students who actively participate in their learning, emotionally invest in their studies, and apply cognitive strategies are more likely to succeed academically. Corroborating this finding, a study by Fredricks, et al. (2004) found that student engagement, cognitive, affective, and behavioural engagements contribute to predicting students' academic success. Similarly, research by Wang and Eccles (2013) confirms that student engagement significantly predicted academic achievement. However, in a contrasting report, Weiss and García (2015) found that stronger engagement of students with teachers does not predict achievement. More so, Amoah et al. (2021) found that students' engagement did not predict academic achievement in the College of Education. These discrepancies may be attributed to contextual factors, such as differences in educational settings, cultural influences, or the specific measures of engagement used.

Conclusion
In conclusion, this study revealed that students in Colleges of Education in North East Nigeria exhibited moderate levels of engagement across cognitive, affective, and behavioural dimensions. Each of these engagement dimensions significantly predicts academic achievement, underscoring the relationship between higher levels of engagement and better academic achievement.

These findings underscore the critical role of fostering holistic engagement in educational settings. By creating environments that stimulate cognitive exploration, emotional investment, and active participation, educators can enhance student achievement. The observed levels of engagement emphasize the necessity for targeted interventions aimed at increasing student involvement, which in turn can lead to improved academic outcomes in Colleges of Education in North East Nigeria.

Recommendation

The following recommendations are essential for enhancing student engagement and academic outcomes.

Given the moderate level of cognitive engagement demonstrated by college students and its significant prediction of academic achievement, it is recommended to enhance cognitive engagement through interactive learning activities. Lecturers should incorporate problem-solving tasks, case studies, and critical thinking exercises into their teaching methods. This approach will stimulate students' intellectual curiosity and deeper cognitive involvement, ultimately leading to improved academic performance.

Considering the moderate level of affective engagement and its significant predictive power on the academic achievement of students, colleges must foster a supportive learning environment. This can be achieved by creating a classroom atmosphere that promotes positive lecturer-student relationships and emotional investment in learning. By ensuring that students feel emotionally supported and connected to their educational experience, their academic engagement and success can be significantly enhanced.

Observing the moderate level of behavioural engagement and its significant relationship with academic achievement, it is recommended to implement active participation incentives. Colleges should develop systems to reward consistent attendance, active class participation, and the completion of assignments. Such incentives will encourage students to engage more actively in their academic activities, thereby improving their academic performance.

Given the moderate level of overall engagement across all dimensions and its predictive power for academic achievement, a holistic approach to student engagement is essential. Colleges of Education should design and implement integrated strategies that simultaneously address cognitive, affective, and behavioural engagement. By providing comprehensive support programmes that cater to all aspects of student engagement, schools can create a more engaging and supportive learning environment, leading to better academic outcomes for students.

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