

TEACHERS' INSTRUCTIONAL FEEDBACK AND STUDENTS' ENGAGEMENT: THE MEDIATING ROLE OF ACADEMIC MOTIVATION IN PUBLIC SECONDARY SCHOOLS IN OWERRI EDUCATION ZONE I AND II

JANE E. IHEKA

Department of Life Science Education
Imo State University, Owerri

ABSTRACT

The study investigated teachers' instructional feedback as a correlate of students' engagement, and the mediating role of motivation in the relationship. Therefore to achieve this goal, a correlation research design was utilized with four research questions and hypotheses guiding the study. A total of 225 JSS II students were sampled from five schools in each of the nine Local Government Areas that make up Owerri Education Zone I and II. A researcher-made instruments titled "Teachers' Instructional Feedback Questionnaire" (TIFQ), "Students' Engagement Questionnaire" (SEQ), and "Students' Academic Motivation Questionnaire" (SAMQ) were used for the study. These instruments were face and content validated by specialists in Educational Psychology and Measurement and Evaluation. To test its reliability, a test-retest was conducted and the result correlated using Pearson Product Moment Correlation which yielded a coefficient of .81 for TIFQ, .76 for SEQ, and .79 for SAMQ. The data obtained were statistically analysed using simple linear regression and multiple regression to answer the research questions, while the hypotheses were tested using ANOVA and Sobel test at .05 level of significance. The result of the study showed that teachers' instructional feedback positively correlates with students' engagement and students' academic motivation, students' academic motivation positively correlates with students' engagement, and that students' academic motivation significantly mediates the relationship between teachers' instructional feedback and students' engagement. Based on the findings, the researcher recommends that teachers should endeavour to provide specific and timely feedback which are crucial in motivating the learners to engage in learning activities.

Keywords: Teachers, Instructional feedback, Students, academic motivation, engagement

Introduction

In the classroom, a learner's active engagement in curricular activities is just as crucial as regular and timely attendance for their intellectual development. Learners' engagement is best understood as the quality of their investment in learning related activities which is demonstrated through their level of focus, sense of curiosity, genuine enthusiasm, and sustained dedication to their studies. This engagement is a multidimensional commitment that involves a student's actions (behavioural), their feelings and interest in the subject (emotional), and their mental strategies for understanding the learning material (cognitive). When a student is engaged across these three areas, their academic achievement is enhanced, and likewise their retention in school.

Learners' engagement is a central component of the educational system, acting as a primary driver for positive student outcomes. According to Nepal and Rogerson (2020), learners' engagement can be defined as the extent which students purposefully dedicate their time and energy to their academic work, their participation in the school community, and their social interactions at the institution. It is important to recognize that this

engagement goes beyond mere participation. A person can physically participate in an activity without being truly engaged. Instead, engagement involves a psychological investment where the emphasis is not on the final outcome, such as a grade, but on the process of deeply understanding a concept and how it can be used in real-life situations. In this way, meaningful learning occurs as students internalize the information they have obtained which is a fundamental element for their success.

Learners' engagement is closely linked to the development of prosocial behaviours, the ability to maintain focus during lessons, and the resilience to overcome academic challenges, all of which are essential for achieving educational objectives. Building on this, Appleton, Christenson, and Furlong (2008) described learners' engagement as a protective factor that helps ensure students remain committed to their academic tasks, which in turn enhances their performance and retention in school. The significant influence of student engagement on educational results has been highlighted in various scholarly studies. For example, research by Hamman, Filgona, and Magaji (2025) investigated the ability of learner engagement to predict academic achievement in colleges of education in North East Nigeria. Their study concluded that cognitive, affective, and behavioural engagement (both independently and jointly) is strong predictors of a student's academic success. In a similar vein, Sukor et al. (2021) explored the connection between engagement and academic performance among non-food science students enrolled in a food science course. Their study confirmed a direct and positive relationship, showing that more engaged students tended to achieve higher academic results. Despite these valuable insights from diverse educational contexts, the extent to which the various dimensions of engagement are predicted by teachers' instructional feedback and motivation remains underexplored within Owerri Education Zone I and II in South-eastern Nigeria.

The active involvement of learners is vital to the success of any educational process. Therefore, teachers are confronted with the difficult task of fostering this essential element in the classroom environment (McMurtrie as cited in Rooney et al., 2025). The difficulties are complex, stemming from issues such as waning student motivation, a diminished sense of responsibility for academic progress, and a rising prevalence of mental health concerns (Rooney et al. 2025). These interconnected issues hinder students from meaningful participation in school activities, posing a direct threat to the achievement of the goals of education. In response to this critical need, the present investigation focuses on instructional feedback as a key teaching strategy to explore its influence on the level of learner engagement.

The practice of providing feedback has been widely studied as a key method for enhancing both student engagement and academic achievement (Yulhendri et al., 2025). Instructional feedback is essentially the response a learner receives from their instructor regarding their approach to learning. The main goal of this feedback is to guide the student, helping them direct their efforts more productively to improve their academic achievement. It provides students with useful information that helps them understand what they are doing well and where they need assistance, thus guiding them toward better performance (Hattie & Clarke, 2020). The positive effects of feedback are most apparent when it is delivered in a timely, clear, and supportive manner. Under these conditions, feedback can foster motivation, which in turn leads to better academic performance (Yulhendri et al., 2025). The significant impact of feedback was highlighted in a study by Hattie and Timperley (2007), who discovered that feedback greatly improves student learning outcomes when it is used effectively. However, the success of feedback is not automatic. Shute (2021) argued that its effectiveness depends on several factors, such as

when it is given, how specific it is, and how the student acts upon it. During a lesson, a teacher's feedback creates a dialogue with the learner, which boosts their engagement in the class and helps create a more meaningful learning experience.

The importance of well-structured feedback was also emphasized by Prabhu et al. (2020), who posited that it must be constructive and timely. They demonstrated that when feedback is not specific to a particular action, delayed, or not constructive, it can lower a learner's confidence and motivation. To avoid this, educators should frame feedback in a non-judgmental way. This encourages students to see their challenges not as a sign of a lack of natural ability, but as opportunities to improve. According to Nicol (2020), when feedback focuses on a student's effort, the effectiveness of their strategies, and their persistence in overcoming difficulties, it helps build resilience and independence, which are crucial for learning. Conversely, when feedback is centred on grades or rankings, it can lead to a fixed mindset, causing students to seek external approval instead of focusing on genuine understanding (Zahid & Almaniam, 2025).

A thorough investigation into the relationship between teacher-provided feedback and student engagement is essential, as both are fundamental components in fostering a successful academic environment. Recognizing this, a growing body of research has begun to explore this connection. For instance, Mayordomo et al. (2022) supported the principle that constructive feedback encourages learners to become more active participants in their education. Their research specifically examined how students perceive online feedback and how this perception affects their cognitive engagement and their emotional engagement. The findings showed a strong and direct correlation: when students found the feedback helpful and clear, their level of engagement noticeably increased. In a similar vein, Yulhendri et al. (2025) studied the impact of receiving feedback on student engagement and overall performance. Their results confirmed that feedback has a significant positive effect, with encouraging or positive feedback proving to be particularly effective at boosting students' involvement and motivation to learn. While these studies and others firmly establish feedback as a key influence on student engagement, this current research introduces a further layer of understanding. It proposes that academic motivation is not just a result of this process, but rather the critical bridge that connects feedback to engagement. In other words, this study argues that the primary way feedback increases engagement is by first stimulating a student's internal desire or motivation to learn.

Academic motivation can be understood as the internal or external force that initiates, guides, and maintains a student's efforts toward achieving their educational goals. This concept holds a central place in the field of educational psychology. According to Okonkwo and Nwankwo (2023) it is a valuable construct because it is “embodied in individuals’ mental structure, mediating cognition and learning, and influencing individual development” (p.28). In essence, motivation is not just a fleeting feeling but a core component of a learner's mental structure that shapes how they process information and learn. Consequently, a student's level of academic motivation is a central prerequisite for instruction to be effective. Without this motivation, learners are likely to become disengaged in the classroom, which in turn can render even the well-designed teaching efforts ineffective. Ukaj and Reshani (2025) emphasize that academic achievement is heavily dependent on both motivation and engagement, noting that the relationship between these two factors is a major focus of significant research. Similarly, Mahara and Hartono (2024) propose a model where these elements create a positive feedback loop: heightened motivation leads to deeper engagement, which then results in higher academic

achievement. This success, in turn, can further fuel a student's motivation, creating a continuous cycle of improvement. Recognizing this critical connection, researchers have actively investigated the direct impact of motivation on student engagement. For example, a study by Agregado et al. (2024) examining the learning of English revealed a significant positive relationship, confirming that students with higher motivation demonstrated greater levels of engagement. In a related study, Arcipe and Balones (2023) explored the impact of motivation on language learning and student engagement, with their analysis of the data also showing a strong, positive correlation between the desire to learn and active participation in the classroom.

This study utilizes a dual-theoretical framework, drawing upon Self-Determination Theory (SDT) and Social Cognitive Theory (SCT), to position motivation as the essential psychological mechanism connecting teachers' feedback to student engagement. Based on Self-Determination Theory which was developed by Deci and Ryan (2000), students are naturally inclined to learn, but this drive is most effectively activated when their fundamental psychological needs are fulfilled. These needs include: Autonomy which pertains to a student's sense of having choice and control over their own learning. When students feel they can direct their actions and take initiative, their motivation is enhanced. Secondly - competence which is the feeling of being effective and capable in mastering academic tasks. It is the belief that one can successfully meet challenges and develop skills. Thirdly, relatedness, this is the need to feel connected to others and to belong within the school community. This sense of belonging is primarily fostered through positive, supportive relationships with teachers and peers. According to SDT, when these three needs are satisfied (which can be done through constructive feedback), it nurtures a student's intrinsic motivation, which in turn manifests as active and meaningful engagement in classroom activities.

Complementing this perspective is Social Cognitive Theory, proposed by Bandura (1986). This theory posits that learning and behaviour are the result of a continuous, reciprocal interaction between three key factors: personal cognitive processes, environmental influences, and one's own behaviour. A central concept in this theory is self-efficacy, which is an individual's belief in their own ability to succeed. In the context of this research, teacher feedback serves as a powerful environmental factor. Constructive feedback can directly shape a student's self-efficacy by providing information about their performance and reinforcing their belief in their academic capabilities. This enhanced self-efficacy, a personal cognitive factor, then acts as a key motivator, driving the student's behaviour – namely, their level of engagement in the classroom. Therefore, SCT provides a model where academic motivation serves as the crucial mediator between the environmental input of feedback and the behavioural outcome of student engagement. The majority of existing research has examined the influence of teacher feedback on student motivation and engagement - solely. For instance, Abbasi et al. (2025) investigated the relationship between teacher feedback and both student motivation and academic performance, and discovered that feedback which is both prompt and specific sustains student motivation. Similarly, Makinde and Sa'adu (2024) explored the impact of teachers' feedback on students' motivation and self-efficacy, finding a significant positive correlation between feedback and a student's drive to learn. However, a notable gap in the literature exists, as few studies have examined motivation as the specific mechanism, or mediating factor, that links instructional feedback with increased student engagement. While Ukaj and Reshani (2025) investigated a related model, their focus was on how motivation and engagement together mediate the relationship between perceived feedback

and academic success. Their results showed that feedback boosts academic outcomes by first increasing motivation, which then enhances engagement. The specific absence of research focusing on motivation as the bridge between feedback and engagement prompted the present study. This research aimed to do more than simply confirm the direct link between instructional feedback and student engagement; it sought to emphasize and test the critical intervening role of academic motivation.

Purpose of the Study

Therefore, the specific objective of this study was to:

1. determine the relationship between teachers' instructional feedback and students' engagement
2. determine the relationship between teachers' instructional feedback and students' academic motivation
3. determine the relationship between students' academic motivation and students' engagement
4. determine the mediating role of academic motivation in the relationship between teachers' instructional feedback and students' engagement

Research Questions

The following research questions guided the study;

1. Is there any relationship between teachers' instructional feedback and students' engagement?
2. Is there any relationship between teachers' instructional feedback and students' academic motivation?
3. Is there any relationship between students' academic motivation and students' engagement?
4. Does academic motivation mediate the relationship between teachers' instructional feedback and students' engagement?

Hypotheses

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

H₀₁: The relationship between teachers' instructional feedback and students' engagement is not statistically significant.

H₀₂: The relationship between teachers' instructional feedback and students' academic motivation is not statistically significant

H₀₃: The relationship between students' academic motivation and students' engagement is not statistically significant

H₀₄: Academic motivation does not significantly mediate the relationship between teachers' instructional feedback and students' engagement

Methods

The study is a correlation research that aims to ascertain the relationship between teachers' instructional feedback and students' engagement while underscoring the crucial role of academic motivation in such relationship. The area of study is Owerri Education Zone I and II which houses 9 Local Government Areas with 152 public secondary schools. A multistage sampling procedure was used to select five schools from each Local Government Area. From the five schools, five students were randomly selected using balloting, making a total sample size of 225 junior secondary two (JSS2) students. The instruments for data collection were researcher-made instruments titled "Teachers' Instructional Feedback Questionnaire" (TIFQ), "Students' Engagement Questionnaire"

(SEQ), and “Students’ Academic Motivation Questionnaire” (SAMQ). TIFQ has 10 items which sought students to rate their teachers instructional feedback , SEQ has 10 items which required the participants to rate their own engagement in academic activities, SAMQ also has 10 items that required the participants to rate their academic motivation. The rating is done through a 4-point likert scale of Strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree – 2 points, and Strongly Disagree (SD) – 1 point. These instruments were face and content validated by specialists in Educational Psychology and Measurement and Evaluation. To test its reliability, a test-retest was conducted on junior secondary school students in Okigwe Local Government Area on an interval of 2 weeks. The result obtained was correlated using Pearson Product Moment Correlation which yielded a coefficient of .81 for TIFQ, .76 for SEQ, and .79 for SAMQ. The permission of the school and the participants were sought and granted before the study was carried on the sampled schools. The researcher visited the schools and administered the instruments on the participants, adequate time was provided for the participants to rate the item statements. After the instruments were properly rated, they were immediately collected from the participants. This ensured a 100% return rate. The data obtained from the administered instruments were statistically analysed using simple linear and multiple regression to answer the research questions, while the hypotheses were tested using ANOVA and Sobel test.

RESULT

Table 1: Simple linear regression on the relationship between teachers’ instructional feedback and students’ engagement

| Model | R | R ² | Adjusted Square | Decision |
|-------|------|----------------|-----------------|----------------------------|
| 1 | .705 | .497 | .505 | High Positive Relationship |

Table 1 shows a regression coefficient of .705 which indicates a high positive relationship between teachers’ instructional feedback and students’ engagement. Therefore increase in teachers’ instructional feedback leads to an increase in students’ engagement.

Table 2: Simple linear regression on the relationship between teachers’ instructional feedback and students’ academic motivation

| Model | R | R ² | Adjusted Square | Decision |
|-------|------|----------------|-----------------|----------------------------|
| 1 | .828 | .685 | .316 | High Positive Relationship |

Table 2 shows a regression coefficient of .828 which indicates a high positive relationship between teachers’ instructional feedback and students’ academic motivation. Therefore increase in teachers’ instructional feedback leads to an increase in students’ academic motivation.

Table 3: Simple linear regression on the relationship between students’ academic motivation and students’ engagement

| Model | R | R ² | Adjusted Square | Decision |
|-------|------|----------------|-----------------|----------------------------|
| 1 | .939 | .882 | .119 | High Positive Relationship |

Table 3 shows a regression coefficient of .939 which indicates a high positive relationship between students’ academic motivation and students’ engagement. Therefore increase in students’ academic motivation leads to an increase in students’ engagement.

Table 4: Multiple regression on the mediating role of academic motivation in the relationship between teachers’ instructional feedback and students’ engagement

| Model | R | R ² | Adjusted Square | Decision |
|-------|------|----------------|-----------------|-------------------|
| 1 | .622 | .387 | .311 | Moderate Positive |

Relationship

Table 2 shows a regression coefficient of .622 which indicates a moderate positive relationship between teachers' instructional feedback and students' engagement through academic motivation. According to the table there is a reduction in the coefficient of relationship between teachers' instructional feedback and students' engagement which shows that academic motivation mediates the relationship between teachers' instructional feedback and students' engagement.

Table 5: Analysis of Variance of the relationship between teachers' instructional feedback and students' engagement

| Model | Sum of Square | Df | Mean Square | F | P-value |
|------------|---------------|-----|-------------|-------|---------|
| 1 | 1131.102 | 1 | 1131.102 | 7.920 | .022 |
| Regression | | | | | |
| Residual | 1142.498 | 223 | 142.812 | | |
| Total | 2273.600 | 224 | | | |

Table 5 shows the test of significance of the relationship between teachers' instructional feedback and students' engagement. The probability value (p-val) of .022 shows that the relationship is significant. Therefore the null hypothesis that stated that "the relationship between teachers' instructional feedback and students' learning engagement is not statistically significant" is rejected. The result of this analysis shows that teachers' instructional feedback significantly correlates with students' learning engagement.

Table 6: Analysis of variance of the relationship between teachers' instructional feedback and students' academic motivation

| Model | Sum of Square | Df | Mean Square | F | P-value |
|------------|---------------|-----|-------------|--------|---------|
| 1 | 1656.310 | 1 | 1656.310 | 17.436 | .003 |
| Regression | | | | | |
| Residual | 760.000 | 223 | 95 | | |
| Total | 2416.4 | 224 | | | |

Table 6 shows the test of significance of the relationship between teachers' instructional feedback and students' academic motivation. The probability value (p-val) of .003 shows that the relationship is significant. Therefore the null hypothesis that stated that "the relationship between teachers' instructional feedback and students' academic motivation is not statistically significant" is rejected. The result of this analysis shows that teachers' instructional feedback significantly correlates with students' academic motivation.

Table 7: Analysis of Variance on the relationship between students' academic motivation and students' engagement

| Model | Sum of Square | Df | Mean Square | F | P-value |
|------------|---------------|-----|-------------|--------|---------|
| 1 | 1439.1 | 1 | 1439.1 | 59.807 | .000 |
| Regression | | | | | |
| Residual | 192.5 | 223 | 24.0623 | | |

Total 1631.6 224

Table 7 shows the test of significance of the relationship between students' academic motivation and students' engagement. The probability value (p-val) of .000 shows that the relationship is significant. Therefore the null hypothesis that stated that "the relationship between students' academic motivation and students' engagement is not statistically significant" is rejected.

Table 8: Sobel test of significance of the mediating role of academic motivation in the relationship between teachers' instructional feedback and students' engagement

| Unstandardized regression | | Standard error | | Sobel Test | | |
|---------------------------|-------------|----------------|-------|------------|-------|---------|
| Coefficient | Coefficient | S_a | S_b | Test | Std. | P-value |
| A | b | | | Statistic | Error | |
| .812 | .764 | .041 | .033 | 15.818 | .039 | .000 |

Table 8 shows that the mediating role of academic motivation in the relationship between teachers' instructional feedback and students' engagement is statistically significant. This is due to the probability value (P-val) of .000 being less than the level of significance .05. Therefore the null hypothesis which stated that "academic motivation does not significantly mediate the relationship between teachers' instructional feedback and students' engagement" is rejected.

Discussion

This study was designed to explore the relationship between teachers' instructional feedback, students' academic motivation, and their subsequent engagement in the classroom. The findings showed a clear and compelling pathway through which effective teaching practices can foster a more dynamic and participatory learning environment. A primary finding of this investigation is the positive relationship between teachers' instructional feedback and the level of student engagement observed in the classroom. The analysis indicates that when teachers provide consistent and meaningful feedback, students are more likely to be actively involved in their learning. This occurs because feedback serves as a critical pedagogical tool that not only sustains students' interest but also provides essential guidance, helping them channel their efforts more effectively toward achieving academic goals. This aligns with the perspective of Hattie and Clarke (2020), who contend that effective feedback functions as a crucial informational signal, indicating areas of strength and pinpointing specific needs for improvement, which in turn directs students toward enhanced academic performance. Further supporting this, Yulhendri et al. (2025) study demonstrated that feedback not only significantly boosts student engagement and overall performance but also highlighted the particular effectiveness of affirmative and encouraging comments in increasing a student's willingness to participate and learn.

Hence, building upon this initial finding, the study then examined the pathway through which feedback influences engagement, specifically by investigating its relationship with students' academic motivation. As anticipated, a significant positive correlation was found between teachers' instructional feedback and students' motivation to learn. When students receive clear, specific feedback, it can validate their efforts, build confidence, and clarify the path to success, all of which motivates them. This finding is consistent with Abbasi et al. (2025), whose findings highlight the motivational benefits of feedback that is not only timely but also highly specific, helping to sustain a student's drive to learn. Similarly, Makinde and Sa'adu (2024) established a clear link between the

quality of teacher feedback and a student's intrinsic motivation, confirming that well-structured feedback directly fuels the desire to achieve academically.

The third objective of this investigation explored the direct connection between a student's internal state and their observable behavior by examining the relationship between students' academic motivation and classroom engagement. The results confirmed a strong positive association between these two variables. Motivation functions as the essential internal catalyst that translates a student's potential into active participation. Without the inherent drive to learn, engagement is likely to be superficial or fleeting. This conclusion resonates with Agregado et al. (2024), who, in their study on English language acquisition, found that students' motivational levels were a strong predictor of their subsequent engagement in learning activities. In a similar vein, Arcipe and Balones (2023) reported a strong correlation between a student's motivation to learn a language and their active, meaningful involvement in the classroom environment.

With the direct pathways from feedback to engagement, feedback to motivation, and motivation to engagement all established, the final and central objective was to test the mediating role of academic motivation. The analysis confirmed that academic motivation indeed serves as a significant mediator in the relationship between teachers' feedback and students' engagement. This nuanced finding suggests that the influence of teacher feedback on student engagement is not merely a direct effect. Rather, a key mechanism through which feedback operates is by first kindling and sustaining a student's academic motivation. This heightened motivation then acts as the primary engine driving increased engagement. This mediating model is corroborated by Ukaj and Reshani (2025), who investigated a similar framework and found that the positive impact of perceived feedback on academic success was channelled through an initial increase in student motivation, which subsequently led to higher levels of engagement.

Conclusion

The aims and objectives of this study have been achieved through the results of the data statistically analysed. It is proven that teachers' instructional feedback - a core classroom strategy is a relevant pedagogical mechanism that ensures students are engaged in their learning activities. It is worthy to note that aside revealing this crucial relationship, the study underscores the critical role of academic motivation which serves as a mediator in the relationship between teachers' instructional feedback and students' engagement. The study therefore showed that teachers' feedback first increases the students' motivation which in turn increases their engagement in learning.

Recommendations

From the findings of the study, the researcher recommends that:

1. Teachers should endeavor to provide specific and timely feedback which are crucial in motivating the learners to engage in learning activities.
2. Activities which interest the learners should be incorporated in the classroom to arouse students' interest and sustain their engagement.
3. During feedback, teachers should ensure that their comments are encouraging and not judgmental so that learners are not demoralized, but rather build resilience.
4. Teachers should acknowledge and give positive feedback to students' personal experience which they bring to the classroom as this would encourage them to engage in the learning activity.

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