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Exploring Motivation Variables as Predictors of Academic Assessment Outcomes Among Junior Secondary School Students in Aba Education Zone, Abia State

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Abstract: *This study explores how motivation variables predict academic assessment outcomes among junior secondary school students in Aba Education Zone, Nigeria. Using a correlational design, 531 students were sampled through a multi-stage approach. Data were collected via the Motivation and Academic Assessment Outcome Questionnaire (MAAOQ), with a reliability coefficient of 0.869. Regression analysis showed that academic self-efficacy ($\beta = .128$, $p < .05$), self-regulation ($\beta = .102$, $p < .05$), and extrinsic motivation ($\beta = .112$, $p < .05$) significantly predicted academic outcomes, while intrinsic motivation ($\beta = .008$, $p > .05$) did not. Motivation variables explained 2.1% of the variance ($R^2 = .021$, $p < .05$), with self-efficacy as the strongest predictor. The study highlights the importance of self-efficacy, self-regulation, and extrinsic motivation in academic success and recommends fostering these skills while balancing intrinsic and extrinsic motivation to improve student assessment outcomes.*

Keywords: Self-efficacy, Self-regulation, Extrinsic motivation, Intrinsic motivation, Academic assessment outcomes

INTRODUCTION

Assessment is the systematic collection, review, and use of information to improve student learning and educational quality (Michael & Lambert, 2024). Similarly, the University of North

Carolina at Greensboro (2022-23) describes program assessment as the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development. "Assessment involves the gathering and evaluation of information on what students know, understand, and can do in order to take an informed decision about the next steps in the teaching and learning process" (Chikezie & Joseph, 2022:1). These definitions emphasize the structured process of gathering and analyzing data to enhance educational programs and student outcomes. Poehner (2007) sees assessment as a process of documenting in measurable terms, the knowledge, skills, attitudes, and beliefs of the learner. Assessment can also be defined as any systematic procedures for collecting, reviewing and using information about learners, so as to make improvement where necessary, indicating that assessment is the process of identifying, gathering and interpreting information about learning (OpenLearn Create. (2004). Assessment is used to determine what students have learned (outcome), the way they learned the material (process), their approach to learning before, during or after the program or course. Students can be assessed before instruction to get a baseline of what students know (for example, by administering a pretest); during instruction, assessment can be used to determine what students are learning so you can adjust your teaching. For students to do well in assessment many things come into play. Primarily, the students must be motivated during learning for a positive assessment outcome.

Ogunode et al. (2023) sees motivation as the force that influences an individual to give their best in realization of goals. As a psychological process initiated by some need or drive which leads to activity that satisfies that need. While Colman (2003) in his view sees motivation as a driving force or forces responsible for initiation, persistence, direction and vagour of goal-directed cause, initiate or direct behaviour. Nnachi (2003) asserted that motivation is a moving force that energizes behaviour which could be either internal (intrinsic) or external (extrinsic). It is intrinsic when it is coming from within and extrinsic when it comes from external aspect of the organism.

LITERATURE

Theoretically, this study anchored Ryan and Deci's Self-Determination Theory and Bandura's Social Cognitive Theory. Ryan and Deci (2000) proposed a Self Determination Theory (SDT). The theory suggests that while some forms of extrinsic motivation are weak, others are more active and self-directed. They conceptualize extrinsic motivation as a continuum that progresses from amotivation (a complete lack of motivation) to different levels of external influence. At the lower end, external regulation occurs when a task is performed solely to meet external demands. Introjected regulation involves completing a task for self-esteem or ego-related reasons. Identification happens when a task is valued for its own sake, and integrated regulation represents the most autonomous form of extrinsic motivation, where external influences are fully absorbed into a person's self-concept and personal values. Although integrated motivation shares some characteristics with intrinsic motivation, it remains extrinsically driven, as the learner's goals are based on external factors rather than inherent enjoyment or interest in the activity.

Intrinsic motivation lies at the far end of this continuum. Understanding these different types of extrinsic motivation is crucial, as they indicate the level of self-determination a student exhibits during learning and reflect the quality of effort they invest in a task (Reeve et al., 2004).

Albert Bandura's Social Cognitive Theory (SCT) (1986) is a prominent psychological framework that explains human learning and behaviour through the dynamic interplay of personal, behavioral, and environmental factors. It evolved from his earlier Social Learning Theory and emphasizes the importance of cognitive processes in learning. Some of the key components of SCT include:

- Self-Efficacy: One of the most influential aspects of SCT is self-efficacy, which refers to an individual's belief in their ability to perform a task successfully. Bandura (1997) argued that individuals with high self-efficacy are more likely to persevere and succeed, whereas those with low self-efficacy are more prone to failure and avoidance behaviors.
- Cognitive Processes in Learning: Unlike behaviorist theories that focus on stimulus-response mechanisms, SCT highlights that learning is an active cognitive process where individuals regulate and direct their behavior through goal-setting, self-reflection, and forethought (Bandura, 1986). Overall, Bandura's Social Cognitive Theory provides a comprehensive explanation of learning and behaviour, emphasizing the role of cognitive processes, observational learning, and self-efficacy. Its wide application in education, psychology, and organizational settings underscores its significance in understanding and shaping human behavior.

Conceptually, there are many factors which can influence motivation of students during assessment such as self-efficacy, intrinsic motivation, extrinsic motivation and self-regulation. Each has a part to play in the academic assessment of a student. Self-efficacy is an individual's belief in their ability to succeed in a specific task necessary to produce performance attainments (Bandura, 1986 cited in American Psychological Association, APA, 2025). It reflects confidence in the ability to exert control over one's motivation, actions, and environment. In the context of academic assessment, self-efficacy refers to a student's belief on their ability to perform well on academic tasks, such as test, class assignment, exams, quizzes, and projects. There are some roles of self-efficacy in academic assessment such as motivation whereby students with high self-efficacy are more motivated to learn and persist in the face of challenges. Efforts where students with high self-efficacy are more likely to put in effort and work hard to achieve their goals; at the same time self-efficacy has been shown to be a strong predictor of academic performed (Oyinlade, 2017). Also students with high self-efficacy are better able to manage stress and anxiety related to assessment (Adeniyi, 2020). Akinyemi (2019) suggested some strategies that can enhance self-efficacy in students which include positive reinforcement whereby praise and reward are given to students for their efforts and achievements; feedback this involve providing feedback that is specific, actionable and focused on improvement; challenging but achievable goals this involves setting goals that are challenging but are attainable to help

students build self-confidence. This is possible by modeling effective strategies and problem solving techniques; collaborative learning which encourages students to work as a team and support each other and mindfulness and relaxation techniques to manage stress and anxiety. By fostering a positive learning environment and providing opportunities for success, teachers can also help students develop a strong sense of self-efficacy (Adeyemi, 2018). By understanding the role of self-efficacy in academic assessment, educators can implement strategies to enhance students' motivation, persistence, and ultimately, their academic achievement.

Self-regulation involves students' ability to manage their thoughts, feelings, and behaviors to achieve academic goals (Oyinlade, 2017). It also refers to the ability to control ones thoughts, emotions and behaviours. It is a crucial skill for academic success, as it allows students to manage their learning, set goals, and persist in the face of challenges. Oyinlade (2017) opines that self-regulation have some roles it plays in academic assessment like improving time management, that self-regulated learners are better able to manage their time effectively, ensuring that they are prepared for assessment; enhanced study habits by developing study habits, such as time management, organization, and note-taking; increased motivation that self-regulated learners are more motivated to learn and achieve their academic goals; better test-taking strategies. Self-regulated learners can use effective test-taking strategies, such as reading instructions carefully managing time wisely and checking their work.

Ogunnaike (2020) suggested some strategies that can help foster self-regulation in students such as goal setting which encourages students to set specific, measurable, achievable, relevant, and time bound (SMART) goals, self-monitoring. Students should be taught on how to monitor their own progress and identify areas for improvement; self-evaluation these provides opportunities for students to access their own work and strengths and weakness; self-reinforcement, this encourages students to reward themselves for achieveing their goals; positive self-talk, which encourages students to use positive self-talk to boost their confidence and motivation. Ogunnaike (2020) suggested some of the roles teachers can play in fostering self-regulation such as modeling. Self-regulation by using time management, organization, and goal setting; providing opportunities for practice which offer students opportunities to practice self-regulation; skills such as through independent learning activities and projects; offering constructive feedback which provides specific and actionable feedback to help students improve their performance; creating a supportive learning environment to foster a positive and encouraging classroom environment that promotes student motivation and self-regulation. By understanding the role of self-regulation in academic assessment, educators can implement strategies to help students develop the skills they need to be successful in learner. Adeyemi (2018) outlined some factors influencing self-regulation such as teacher support and feedback; parental involvement; learning strategies; academic achievement and student autonomy. While Oyinlade (2017) talked about the impact on academic assessment such as enhanced academic performance; increased persistence and effort, better time management, improved self-confidence and self-efficacy and reduced anxiety and stress.

Intrinsic motivation refers to the internal drive to engage in an activity for its own sake, without external rewards or punishments. In the context of academic assessment, intrinsic motivation can significantly impact students' performance and overall learning experience. Ogunnaike (2020) discussed on some roles of intrinsic motivation in academic assessment which include enhanced engagement whereby intrinsically motivated students are more likely to be engaged in learning activities, pay attention, and participate actively in class; intrinsic motivation can lead to better academic performance, as students are more likely to put in effort and persist in challenging tasks. Ogunnaike (2020) in his discussion emphasized that most students who exhibits intrinsically motivation develops a positive attitude towards learning, which can lead to increased enjoyment and satisfaction. It can also foster a life-long love for learning, which is essential for personal and professional success.

Adeniyi (2020) suggested some strategies which can help foster intrinsic motivation among students. To Adeniyi (2020) it gives students choice and control over learning, provide opportunities for students to experience success and develop a sense of mastery, create a positive and supportive classroom environment where students feel connected to their peers and teachers; connect learning to real-world situations and students interest; use positive reinforcement to encourage and motivate students and lastly, over-reliance on extrinsic rewards can undermine intrinsic motivation. In the context of the current, fostering intrinsic motivation can significantly improve students' academic assessment outcomes by implementing strategies that encourages students' engagement in learning, and persevere through challenges,

Extrinsic motivation refers to external factors driving academic engagement, such as rewards, recognition and social pressure. Deci and Ryan (2020) see extrinsic motivation as that which comes from external sources, such as, rewards, punishments, or social recognition. Extrinsic motivation can significantly impact students assessment outcomes. Wigfield and Ecclestone (2015) suggested some of the roles extrinsic motivation plays in academic assessment such as increasing the efforts of students, in that praise, rewards or tangible rewards can encourage students to put in more effort and time into their studies, improving students performance, students desire to obtain external reward can push or lead them to improved performance on assessment, and provides encouragement. When students are rewarded with material or non-material things, it goes a long way to increase their engagement in learning activities. Okoye (2019) brings out some of the challenges in too much use of extrinsic motivation, to him excessive reliance on extrinsic rewards can decrease intrinsic motivation and make students less likely to engage in activities for their own sake. Okoye talked about short term effects that extrinsic motivation may only have a temporary impact on students behavior and performance in that any day such motivation is withdrawn the students. Okoye is of the view that over use of extrinsic rewards can undermine intrinsic motivation, leading to a decreased interest in learning. Nwafor (2020) suggested some strategies that can be adopted for effective use of extrinsic motivation which include balancing extrinsic and intrinsic motivators, such as providing opportunities for choice, autonomy, and meaning learning experiences. Using rewards

strategically, his point here is that rewards should be used selectively and tied to specific behaviors or achievements. Providing specific and timely feedback, he is of the opinion that positive feedback can reinforce desired behavior and motivate students to continue working hard and lastly, creating a positive and supportive learning environment can enhance students' motivation and engagement to study hard and get ready for their assessment such as: test, quizzes or summative or termly examination. Extrinsic motivation, though a powerful tool for improving academic assessment outcomes, should be used judiciously and in conjunction with intrinsic motivation. By understanding the potential benefits and drawbacks of extrinsic motivation, educators can effectively use it to enhance student learning and achievement.

Empirically, earlier researchers have explores these motivation variables. Qin et al. (2023). This study examines the mediating role of learning engagement between self-efficacy and academic achievement among Chinese college students. 1158 Chinese college students were used (544 men, and 614 female) M=19.37, SD=1.16, ranging from 17 to 30 years. Results showed that among Chinese college students, there positive correlations between academic self-efficacy and both academic achievement and learning engagement, and between learning engagement and academic achievement. In conclusion academic self-efficacy, learning engagement and academic achievement were found to be significant and positively associated in Chinese college students. Johan et al. (2009) investigated academic self-efficacy and academic self-concept: reconsidering structural relationships. Results indicate that maths self-efficacy and maths self-concept do indeed represent conceptually and empirically different constructs even when studied within the same domain, students' academic self-concept strongly influence their academic self-efficacy beliefs and that academic self-concept is the better predictor (and mediator) for academic achievement. In another development, Abid et al. (2009) analyzed the relationship between academic self-efficacy and academic performance among university undergraduate students. the sample was drawn from two universities (public and private) has a total population of 293 students (140 females and 153 male students) stratified sampling was used for the study. Descriptive and inferential statistics were used to analyze the differences and relationship between academic self-efficacy and academic performance among university undergraduate students. The results obtained, revealed that there is a statistically significant relationship between academic self-efficacy and academic performance among university undergraduate students ($r_{(293)}$=.816, p< .01). there were differences noted as regards gender in the students' academic self-efficacy ($t_{(291)}$=2.76, p< .01) and academic performance ($t_{(291)}$=1.56, p< .05).

The study of Alexander (2023) determined the antecedent role of self- regulation skills in the students' academic achievement. A descriptive research design was used in line with mixed methods. A total of 382 grade II senior high school students of private school in Cagayan de oro city were the respondents of the study. Findings of the study revealed that reflection stood overall self-regulation skills significantly influence their academic achievement. Self-regulation skills of reflection, planning, time management, and monitoring have various degree of impact on academic achievement. It is recommended that teachers should design lessons and activities

that prompt the students to engage in meaningful self-reflection, which can foster deeper understanding and improved performance. Similarly, Secna- Scieed et al. (2022) examines the conceptions of assessment and its relationship to self-regulation and self-confidence among pre-services teachers. Participants were 278 pre-service students attending a teachers college in Britain. The study employed the structural equation modeling approach to investigate the relationships among the observed variables. Findings revealed that conceptions of assessment had positively impacted the academic achievement of students who were accountable. In addition, the conceptions that made schools accountable had a positive relationship, relationship with academic achievement whereas students, who ignored the assessment, received a negative effect on self-regulation.

Venjie (2021). The study investigated the impact of academic intrinsic motivation (AIM) factors on students academic performance. A descriptive method was adopted for the study. intrinsic motivation was assessed using AIM survey, which measures motivational factors on a seven point liket scale. AIM survey has reliability coefficients of .7748 and .8627 determined using test-retest method. The academic performance of the students was measured by obtaining their final grades according to the standards of the department of education. Data generated was analyzed with the aid of IBM SPSS statistics 25. The study concluded that AIM factors has strong positive impact on students academic performance. Significant differences were found between intrinsic factors and extrinsic factors of AIM scale.

Onyekwere et al. (2018). The study investigated the influence of extrinsic and intrinsic motivation on pupils academic performance in mathematic. Two hypotheses guided the study descriptive research design was adopted for the study. The population of the study consists of all 3056 primary six pupils in Owerri education zone of Imo state. A sample size of 200 primary six pupils was selected for the study. Simple random sampling technique was used in selecting four schools out of nine schools. The instrument used for data collection academic motivation scale and mathematic achievement test. The instruments have reliability co-efficient of 0.89 and 0.92 determined test-retest method. Data generated was analyzed with the aid of SPSS version 25. Inferential statistics of T-test and Pearson Product Moment Correlation were used to test the hypothesis at 0.05 level of significance. The study concludes that motivation improves academic performance of the pupils and there is gender difference in motivation type and academic performance.

Null Hypotheses

1. Academic self-efficacy does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.
2. Self-regulation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.
3. Extrinsic motivation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

4. Intrinsic motivation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.
5. Motivation variables do not collectively contribute as significant predictors academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

METHODOLOGY

This study adopted a quantitative approach of correlation research design. Basically, correlation designs comprised relationship study and predictive study (Chikezie & Joseph, 2021). This study is a predictive study exploring the motivation variables as predictive variables (academic self-efficacy, self-regulation, extrinsic motivation, and intrinsic motivation) and academic assessment outcomes as the criterion variable.

The population for the study consisted of all junior secondary school students in Aba Education Zone, Abia State, during 2023/2024 academic session. The sample for the study was drawn using a multi-stage sampling approach. First four LGAs were randomly selected from the nine existing LGAs, in Aba Education Zone. Secondly, two junior secondary schools were randomly drawn from each of the four LGAs. Finally, the students in the eight schools selected constituted the sample giving a total sample size of 531.

The researchers developed an instrument tagged "Motivation and Academic Assessment Outcome Questionnaire (MAAOQ). The questionnaire consisted of 16 items eliciting information on variables of motivation, each contributing four items(academic self-efficacy, self-regulation, extrinsic motivation, and intrinsic motivation). The instrument was responded on five-point Likert-scale as follows: Strongly Agreed (SA)-4 points, Agree (A)-3 points, Disagree (D)-2 points, and Strongly Disagree (SD)-1 point; and Neutral (N)-0.

The instrument was validated by colleagues in educational measurement and Evaluation and Psychology. Their suggestions were used in improving the last version used for data collection. In order to estimate the reliability for internal consistency of the instrument it was administrated on 30 neutral subjects who were not part of the final study sample but were part of the study area. The scores obtained were computed and analyzed using Cronbach alpha statistics which yielded a reliability coefficient of 0.869. Scores for academic assessment outcome were obtained from teachers in the sampled schools the researchers assumed that the scores were generated from reliable achievement tests.

The data collected was analyzed using Statistical Package for Social Sciences version 25 (SPSS-25). The research questions were answered using descriptive statistics and by estimating standardized regression coefficients (Beta weights). The decision rule was based on the fact that Beta weights indicate the strength of prediction. Beta weight greater than zero is evidence that the independent variable, motivation variables (predictor variable) could predict the academic

assessment outcomes (criterion variable). The hypotheses were tested at .05 alpha levels. Furthermore, the tenability of a null hypothesis was based on the F-ratio in the ANOVA of multiple regression output. F-ratio with probability level of equal to or less than the alpha level was rejected, and if it is greater than the alpha level, it was retained.

RESULTS

Hypothesis 1: Academic self-efficacy does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Table 1. ***Regression Analysis of Academic Self-efficacy as Significant Predictors of Academic Assessment Outcome***

Model	R	R Square	Adjusted R Square	SE	Sig.
1	.128[a]	.016	.015	13.74157	.003

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1669.477	1	1669.477	8.841	.003[b]
	Residual	99891.438	529	188.831		
	Total	101560.915	530			

Table 1 shows that in the model summary R^2 of .016 indicates that 1.6% of the variance in academic assessment outcome is explained by self-efficacy and this was significant ($p < 05$). The ANOVA table revealed that F-ratio $_{(1, 529)} = 8.841$ is significant ($p < 05$). These imply that self-efficacy predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Hypothesis 2: Self-regulation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

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Table 2. ***Regression Analysis of Self-Regulation as Significant Predictors of Academic Assessment Outcome***

Model	R	R Square	Adjusted R Square	SE	Sig.
1	.102[a]	.010	.009	13.78375	.019

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1055.269	1	1055.269	5.554	.019[b]
	Residual	100505.646	529	189.992		
	Total	101560.915	530			

Table 2 reveals that in the model summary R^2 of .010 indicates that 1.0% of the variance in academic assessment outcome is explained by self-regulation and this was significant ($p < 05$). The ANOVA table revealed that F-ratio $_{(1, 529)} = 5.554$ is significant ($p < 05$). These imply that self-regulation predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Hypothesis 3: Extrinsic motivation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Table 3. ***Regression Analysis of Extrinsic Motivation as Significant Predictors of Academic Assessment Outcome***

Model	R	R Square	Adjusted R Square	SE	Sig.
1	.112[a]	.013	.011	13.76886	.010

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1272.325	1	1272.325	6.711	.010[b]
	Residual	100288.590	529	189.581		
	Total	101560.915	530			

As can be seen in Table 3, the model summary R^2 of .013 indicates that 1.3% of the variance in academic assessment outcome is explained by extrinsic motivation and this was significant ($p < 05$). The ANOVA table indicates that F-ratio $_{(1, 529)} = 6.711$ is significant ($p < 05$). These show

that extrinsic motivation predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State

Hypothesis 4: Intrinsic motivation does not significantly predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Table 4. ***Regression Analysis of Intrinsic motivation as Significant Predictors of Academic Assessment Outcome***

Model	R	R Square	Adjusted R Square	SE	Sig.
1	.008[a]	.000	-.002	13.85546	.850

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.852	1	6.852	.036	.850[b]
	Residual	101554.063	529	191.974		
	Total	101560.915	530			

Table 4 reveals that in the model summary R^2 of .000 indicates that no variance of academic assessment outcome is explained by intrinsic motivation and this was not significant ($p > 05$). The ANOVA table revealed that F-ratio $_{(1, 529)} = .036$ is not significant ($p > 05$). These imply that intrinsic motivation does not predict academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Hypothesis 5: Motivation variables do not collectively contribute as significant predictors academic assessment outcome among secondary school students in Aba Education Zone, Abia State.

Table 5. ***Regression Analysis on the Collective Contribution of Motivation Variables as Significant Predictors of Academic Assessment Outcome***

Model	R	R Square	Adjusted R Square	SE	Sig.
1	.146[a]	.021	.014	13.74662	.023

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2162.952	4	540.738	2.862	.023[b]
	Residual	99397.963	526	188.970		
	Total	101560.915	530			

Table 15 indicated that R^2 (.021) means that all the predictors collectively account for 2.1% of the total variance in academic assessment outcome by the collective contribution of motivation variables and it is statistically significant ($p < .05$). The ANOVA table returned F-ratio $_{(4,526)}$ = 2.862 which is also statistically significant ($p < .05$).

DISCUSSION

The purpose of the study was to explore motivation variables as predictors of academic assessment outcomes among junior secondary school students in Aba Education Zone, Abia State. The result from testing the first hypothesis indicated that academic self-efficacy significantly predicts academic assessment outcomes. This finding aligns with existing literature emphasizing the role of self-efficacy in shaping academic assessment outcomes. Bandura's (1986) Social Cognitive Theory supports this observation, positing that self-efficacy influences students' motivation and persistence in academic tasks. Similarly, earlier studies by Abid et al. (2009); Schunk and Pajares (2001); Qin et al. (2023); have demonstrated that students with higher self-efficacy are more likely to set challenging goals and persist in achieving them, thereby enhancing their academic outcomes. The modest the contribution to the variance in academic assessment outcome as explained by self-efficacy (1.6%) suggests that while academic self-efficacy is a significant predictor, other factors also contribute to academic assessment outcomes. This highlights the multifaceted nature of academic assessment outcomes as influenced by motivational, cognitive, and environmental variables (Adeyemi, 2018).

The finding of the second hypothesis shows that self-regulation significantly predicts academic assessment outcomes. This finding is expected as it demonstrates the role of self-regulation as a motivational variable in academic assessment outcomes. Self-regulation enables students to plan, monitor, and evaluate their learning processes, leading to better outcomes (Oyinlade, 2017). Earlier studies are supported by the current study emphasizing that self-regulation skill of reflection; planning, time management, and monitoring have various degree of positive relationship with academic achievement (Secna et al., 2022; Alexander, 2023). Further the finding indicates that self-regulation explains only a small portion of the variance, suggesting the interplay of other factors such as increased persistence and effort, better time management, improved self-confidence, teacher support and feedback; parental involvement; learning strategies; academic achievement and student autonomy (Zimmerman, 2002; Oyinlade, 2017; Adeyemi, 2018).

The third hypothesis reveals that extrinsic motivation significantly predicts academic assessment outcomes. These findings emphasize the influence of extrinsic motivation such as rewards, recognition, or grades on academic achievement. The finding is not surprising because it corroborated with earlier studies which found that students who are extrinsically motivated have batter assessment scores than those that are not (Lepper et al. (2005); Emmett & McGee, 2013; Ode, 2018; Onyekwere et al., 2018). Further, the influences of extrinsic and intrinsic motivation

on academic achievement were explored and it was found that excessive reliance on extrinsic rewards can decrease intrinsic motivation and make students less likely to engage in activities for their own sake hence, over use of extrinsic rewards can undermine intrinsic motivation, leading to a decreased interest in learning (Okoye, 2019). The predictive value of extrinsic motivation is modest, this suggests that extrinsic motivation plays a minor role in shaping students' academic outcomes and highlights the need for a balanced approach that integrates both intrinsic and extrinsic motivators in educational strategies (Nwafor, 2020).

Testing the fourth hypothesis shows that intrinsic motivation does not significantly predict academic assessment outcomes. This finding suggests that intrinsic motivation, which involves engagement in learning for its inherent satisfaction, does not directly predict the academic assessment outcomes in this context. This contrasts with theoretical expectations based on Deci and Ryan's (2000) Self-Determination Theory, which argues that intrinsic motivation fosters sustained academic engagement and achievement. However, contextual factors such as educational structures, teacher expectations, or cultural emphasis on extrinsic rewards may attenuate the effects of intrinsic motivation. Disagreeing with the finding of the current study, Zyngier, 2008 cited in Saeed and Zyngier (2012) contended that intrinsic motivation assisted authentic student engagement in learning, and that extrinsic motivation served to develop ritual engagement in students however, students who had both types of motivation showed different types of engagement. In contrast, Ogunnaike (2020) opined that intrinsic motivation poly key role in academic assessment outcome of students which include enhanced engagement hence, intrinsically motivated students are more likely to be engaged in learning activities, pay attention, and participate actively in and are more likely to put in effort and persist in challenging tasks. This results is surprising as intrinsic motivation accounts for no variance in academic assessment outcomes, this can be explained by over-reliance on extrinsic rewards which undermine intrinsic motivation (Adeniyi, 2020).

The fifth hypothesis tested the collective contribution of the motivation variables to academic assessment outcomes.. The results reveal that motivation variables (self-efficacy, self regulation, extrinsic motivation and intrinsic motivation) collectively predict academic assessment outcomes significantly. These findings highlight the role of motivation variables in shaping academic assessment outcomes and align with Deci and Ryan's (2000) who assert that both intrinsic and extrinsic motivators, alongside regulatory mechanisms, interact to influence academic behaviors. Furthermore, Bandura's (1986) emphasizes the interconnected roles of cognitive and motivational factors in academic achievement. Although, the collective contribution is statistically significant, the modest contribution to the total variance suggests that other factors may play larger roles in determining academic assessment outcomes. This underscores the need for a holistic approach to understanding and enhancing student assessment outcomes.

Implications to Research and Practice

From a research perspective, the study contributes to the growing body of knowledge on the relationship between motivation and academic assessment outcomes, particularly among junior secondary school students in Aba Education Zone. By confirming the predictive roles of self-efficacy, self-regulation, and extrinsic motivation while questioning the influence of intrinsic motivation, this study highlights the complexity of motivational dynamics in academic settings. For educational practice, the study suggests that interventions aimed at improving student motivation should be multi-faceted. Educators should focus on fostering self-efficacy by providing positive reinforcement, setting achievable goals, and offering constructive feedback. Encouraging self-regulation skills, such as time management and goal-setting, can further enhance students' academic outcomes. While extrinsic rewards can serve as short-term motivators, educators must be cautious not to undermine intrinsic motivation by over-relying on incentives. A balanced approach that integrates both intrinsic and extrinsic motivators within instructional strategies may yield the best results. Furthermore, school administrators should consider implementing teacher training programs focused on motivation-enhancing instructional strategies to maximize student engagement and performance.

CONCLUSION

This study explored the role of motivational variables as predictors of academic assessment outcomes among junior secondary school students. The findings underscore the significance of self-efficacy, self-regulation, and extrinsic motivation in shaping academic assessment performance. However, intrinsic motivation was not found to significantly predict academic outcomes, suggesting that other contextual factors may influence its role in student performance.

Future Research

Future research should focus on expanding the scope of motivational influences on academic assessment outcomes by incorporating other variables such as teacher-student relationships, parental involvement, and socio-economic factors. Longitudinal studies are recommended to assess how motivation variables interact over time and their long-term impact on student performance. Additionally, qualitative studies exploring student perspectives on motivation and assessment would provide deeper insights into the mechanisms influencing academic behaviors. Further investigation is needed to understand the contextual factors that may suppress the predictive power of intrinsic motivation. Cross-cultural studies could explore whether intrinsic motivation plays a more significant role in different educational settings. Experimental studies that manipulate intrinsic and extrinsic motivation strategies could also help determine effective methods for fostering long-term academic engagement. By addressing these gaps, future research can contribute to the development of more effective educational interventions and policies aimed at improving student assessment outcomes.

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