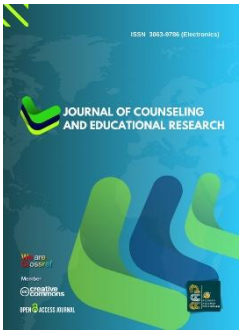
Asosiasi Asesmen Pendidikan (AAP)
Address: Bumi Mutiara Serang, Cluster Symphony, Blok C2 No.18 Serang – Banten, 42122 – Indonesia.
☎ +62 85312898866; jurnal@aapbk.org




**Journal of Counseling and Educational Research**

ISSN 3063-9786 (Electronic)
Editor: Rima Pratiwi Fadli

Publication details, including author guidelines
URL: https://journal.aapbk.org/index.php/jcerch/about/submissions#authorGuidelines

# Adapting and Validating a Measurement Battery for Academic Cheating Proneness: Its Correlates among Nigerian In-School Adolescents

**Gafar Isiaka**
Unit for Distance Education, Faculty of Education, University of Pretoria, South Africa

**Article History**
Received : 02 April 2026
Revised : 25 April 2026
Accepted : 27 April 2026

**How to cite this article (APA 6th)**
Isiaka, G. (2026). Adapting and Validating a Measurement Battery for Academic Cheating Proneness: Its Correlates among Nigerian In-School Adolescents. *Journal of Counseling and Educational Research, 2*(3), 146–161. DOI: 10.63203/jcerch.v2i3.315

**The readers can link to article via** https://doi.org/10.63203/jcerch.v2i3.315

**Correspondence regarding this article should be addressed to:**
Gafar, isiakagafar87@gmail.com, University of Pretoria, South Africa.



The authors whose names are listed in this manuscript declared that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript. This statement is signed by all the authors to indicate agreement that the all information in this article is true and correct.

Journal of Counseling and Educational Research (2026), 2(3), 146-161
ISSN 3063-9786 (Electronic)
https://doi.org/10.63203/jcerch.v2i3.531

Original Article

# Adapting and Validating a Measurement Battery for Academic Cheating Proneness: Its Correlates among Nigerian In-School Adolescents

**Gafar Isiaka**
Unit for Distance Education, Faculty of Education, University of Pretoria, South Africa

**Abstract.** Nigerian secondary school researchers face an urgent methodological crisis: no validated, culturally appropriate instruments exist for measuring academic cheating proneness and its key psychological correlates among adolescents in this context. This paper employs an instrument adaptation and psychometric validation design to address this gap, reporting the systematic cross-cultural adaptation of a four-instrument measurement battery comprising the Proneness to Academic Cheating Behaviours Questionnaire (PACBQ), the Self-Efficacy Questionnaire (SEQ), the Procrastination Scale (PS), and the Locus of Control Scale (LOCS). These four instruments were selected as a theoretically coherent package, collectively capturing the full psychological profile of the cheating-prone student within Social Cognitive Theory and Cognitive Behavioural Theory frameworks. Each instrument underwent expert panel appraisal, item deletion, cultural contextualisation, and linguistic simplification. Content validity was established through a five-member expert review panel, with inter-rater agreement exceeding 80%. Test-retest reliability, assessed on a pilot sample of 20 SS1 students at a two-week interval, yielded coefficients of 0.89 (PACBQ), 0.90 (SEQ), 0.90 (PS), and 0.92 (LOCS). The main study involved 102 students selected via multi-stage sampling. Implications for counselling practice and further psychometric development are discussed.

**Keywords:** Instrument Adaptation; Psychometric Validation; Academic Cheating Proneness; Self-Efficacy; Procrastination

Corresponding author: Gafar, isiakagafar87@gmail.com, University of Pretoria, South Africa.



## Introduction

Academic cheating behaviours, including plagiarism, copying, impersonation, the use of unauthorised materials, and bribery of examiners, have reached alarming proportions in Nigerian secondary schools and across Sub-Saharan Africa, constituting one of the most documented crises in contemporary African education. National surveys indicate that as many as 62% of Nigerian secondary school students engage in some form of examination misconduct before graduation, and Nigeria has been ranked among the highest-scoring countries on global indices of examination fraud (Hassan, 2016). These figures are not isolated: comparative evidence from Ethiopia similarly documents widespread justification of cheating among secondary students (Dejene, 2021), while recent studies in West Africa suggest that examination malpractice is increasingly normalised as a rational response to high-stakes testing pressure and inadequate school resourcing (Owusu-Agyeman & Fourie-Malherbe, 2023; Omondi & Ayodo, 2022). The consequences are far-reaching: the erosion of educational quality, the production of incompetent graduates, the devaluation of Nigerian academic credentials, and the cultivation of

a culture of dishonesty that extends beyond the classroom into professional and civic life (Dimpka, 2011; Transparency International, 2015).

Addressing this challenge through counselling and educational interventions requires, as a prerequisite, reliable and valid tools for measuring academic cheating proneness and its psychological correlates. Proneness to academic cheating is defined as the tendency or predisposition of a student to engage in dishonest academic behaviours, which is closely linked to three key psychological variables: self-efficacy, procrastination, and locus of control (Murdock, Hale & Weber, 2001; Barzegar & Khezri, 2012; Novita & Jannah, 2022; Rinn et al., 2014). Students with low academic self-efficacy, high procrastination tendencies, and an external locus of control have consistently been found to be more prone to academic cheating across a range of educational contexts. However, it is important to note that findings across studies are not uniform. While Murdock et al. (2001) found self-efficacy to be among the strongest predictors of cheating in early adolescence, Finn and Frone (2004) demonstrated that this relationship was moderated by school identification, suggesting that self-efficacy alone is insufficient as a predictor without considering broader motivational context. Similarly, although procrastination is widely implicated in cheating (Novita & Jannah, 2022), found that its predictive strength varied significantly depending on religiosity and locus of control, indicating that these constructs interact rather than operate independently. Such nuances underscore the necessity of measuring all three correlates simultaneously rather than in isolation, justifying the multi-instrument battery approach adopted in this study.

Despite this evidence base, a critical methodological gap not merely inconvenient but fundamentally debilitating persists in Nigerian educational research: existing instruments for measuring these constructs were predominantly developed and validated in Western, East Asian, or Middle Eastern contexts, and may not adequately reflect the cultural, linguistic, and educational realities of Nigerian in-school adolescents. The uncritical adoption of foreign instruments without adaptation risks measurement error, cultural bias, and inaccurate conclusions, undermining the integrity of research findings and the effectiveness of counselling interventions designed on their basis. Prior adaptation studies in comparable developing-country contexts illuminate the gravity of this gap. Hambleton et al. (2005) demonstrated that direct instrument importation across cultures routinely produces inflated or deflated reliability estimates and construct-irrelevant variance. In a related vein, Soares et al. (2022) found that even within a single country, Brazil, significant item revision was required when moving instruments between university and secondary school populations. For Nigeria specifically, no published study has yet subjected instruments measuring academic cheating proneness, self-efficacy, procrastination, and locus of control to the rigorous, systematic adaptation process that cross-cultural measurement standards demand (Hambleton et al., 2005). The existing body of Nigerian cheating research thus rests on an unvalidated methodological foundation, a gap that is not peripheral but central to the field's scientific credibility.

This paper addresses this gap by reporting the systematic adaptation and psychometric validation of a four-instrument measurement battery for use among Nigerian secondary school students. The battery brings together four instruments: the Proneness to Academic Cheating Behaviours Questionnaire (PACBQ), the Self-Efficacy Questionnaire (SEQ), the Procrastination Scale (PS), and the Locus of Control Scale (LOCS) into a coherent, culturally relevant measurement framework. The paper details the rationale for selecting each instrument, the specific adaptations made, the procedures for establishing content validity and test-retest reliability, and the implications of the battery for counselling research and practice in Nigeria.

## Theoretical and Conceptual Background

*Academic Cheating Proneness and Its Correlates*

Proneness to academic cheating is understood within the framework of Cognitive Behavioural Theory (Beck, 2011) and Social Cognitive Theory (Bandura, 2009) as arising from the interaction of distorted cognitive patterns, maladaptive behavioural habits, and social environmental influences. These two theoretical frameworks are complementary rather than competing: SCT explains how students' beliefs about their own academic capabilities (self-efficacy) are shaped by social modelling and prior performance experiences, while CBT explains how these beliefs, once distorted, generate cognitive rationalisations that normalise cheating as an acceptable response to perceived academic threat. Together, they provide a robust theoretical basis for expecting self-efficacy, procrastination, and locus of control to predict cheating proneness jointly, and for treating the measurement of all three correlates as theoretically indispensable. Three psychological constructs have emerged in the literature as particularly significant correlates of cheating proneness:

Self-efficacy refers to an individual's belief in their capacity to organise and execute actions required to achieve designated goals (Bandura, 1994). Students with low academic self-efficacy are more likely to perceive cheating as a necessary coping strategy in the face of academic challenges, as they lack confidence in their ability to succeed through legitimate effort (Finn & Frone, 2004) The inverse relationship between self-efficacy and cheating proneness has been demonstrated across multiple studies (Murdock et al., 2001; Barzegar & Khezri, 2012).

Procrastination refers to the habitual delay of academic tasks, which creates time pressure, panic, and desperation that significantly increase the likelihood of cheating (Novita & Jannah, 2022). Students who consistently procrastinate arrive at examination situations underprepared, and cheating becomes a perceived means of avoiding failure. The relationship between procrastination and cheating is bidirectional and cyclical, reinforcing maladaptive academic habits over time.

Locus of control reflects an individual's generalised expectancy about whether outcomes are determined by their own behaviour (internal locus) or by external forces such as luck, fate, or powerful others (external locus) (Rotter, 1966; Kumar & Asha, 2016). Students with an external locus of control are more prone to academic cheating, as they attribute their academic outcomes to factors beyond their control and therefore see little incentive to invest effort in legitimate preparation (Anyanwu, 2020; Rinn et al., 2014).

However, these three constructs, self-efficacy, procrastination, and locus of control, constitute a coherent psychological profile of the student prone to academic cheating. Conceptually, low self-efficacy functions as the distal antecedent: a student who doubts their academic capability is more likely to procrastinate on demanding tasks, and procrastination in turn generates the time pressure and unpreparedness that make cheating situationally rational. An external locus of control compounds this pattern by removing the student's sense of personal agency over outcomes, further diminishing the perceived value of legitimate effort. This sequential, reinforcing dynamic is consistent with both SCT (which identifies self-efficacy as the foundational motivational variable) and CBT (which traces the cognitive distortions that enable rationalisation of dishonest behaviour). It is important, however, to acknowledge that this conceptual model is primarily derived from Western and Asian research contexts; direct empirical tests of this sequential model within Nigerian secondary school samples are, as yet, absent from the published literature, which is an additional gap that the present battery is designed to help future researchers address. A measurement battery that captures all four dimensions (cheating proneness, self-efficacy, procrastination, and locus of control) provides researchers and practitioners with a comprehensive diagnostic tool for identifying at-risk students and designing targeted, theory-driven interventions.

*The Need for Cultural Adaptation in Instrument Development*

Instrument adaptation refers to the process of modifying an existing validated measure to ensure its appropriateness for a new cultural, linguistic, or contextual setting (Hambleton, Merenda & Spielberger, 2005). Adaptation is distinct from mere translation: it involves substantive review of item content, response formats, cultural assumptions embedded in item wording, and construct equivalence across populations.

In the Nigerian secondary school context, several factors necessitate careful adaptation of foreign instruments. First, the linguistic register of many Western instruments assumes a level of English language proficiency and familiarity with academic conventions that may exceed the competence of secondary school students. Second, specific cheating behaviours described in foreign instruments, such as accessing digital databases for plagiarism or submitting commercially purchased term papers, may not reflect the forms of cheating most prevalent in Nigerian secondary schools, which include writing on body parts, using smuggled paper chips ('expo'), and receiving answers through coded signals. Third, cultural norms around academic honesty, authority, and peer cooperation differ significantly between Western and Nigerian contexts, affecting how students respond to items about cheating attitudes and behaviours.

These considerations underscore the necessity of systematic adaptation rather than direct adoption of foreign instruments in Nigerian educational research. Prior cross-cultural adaptation studies offer instructive lessons in this regard. Soares et al. (2022), adapting the Academic Procrastination Scale for Brazilian university students, found that even within a culturally proximate population, multiple items required rewording to achieve construct equivalence, and that failure to do so produced factor loadings inconsistent with the original structure. Similarly, AbdulGafoor and Ashraf (2006), in developing the SEQ for Indian secondary students, emphasised that items originally calibrated for Western academic contexts carried implicit assumptions about classroom autonomy and teacher-student relationships that did not transfer without modification. These examples reinforce the view that adaptation is not a minor procedural step but a substantive psychometric enterprise. In line with these principles, the present study adopted a systematic adaptation protocol involving forward item review by the researcher, expert panel appraisal using standardised evaluation criteria, item-level revision, deletion of culturally irrelevant content, and contextual reframing for the Nigerian secondary school setting, as detailed.

## Method

*Instrument Selection and Rationale*

The four instruments selected for adaptation were chosen based on three criteria: (i) demonstrated psychometric quality in their original contexts; (ii) conceptual alignment with the theoretical framework of the study; and (iii) suitability for adaptation to the Nigerian secondary school context. Table 1 provides an overview of the original instruments.

**Table 1:** Overview of Original Instruments Selected for Adaptation

| Instrument | Original Authors | Original Items | Original Context | Reliability |
|---|---|---|---|---|
| PACBQ | Salehi & Gholampour (2021) | 46 (18 cheating items) | Iranian university students | 0.74 |
| SEQ | AbdulGafoor & Ashraf (2006) | 40 | Indian secondary students | 0.85 |
| PS | Soares et al. (2022) | 25 | Brazilian university students | 0.90 |
| LOCS | Trice (1985) | 28 | US college students | Not reported |

*Note: PACBQ = Proneness to Academic Cheating Behaviours Questionnaire; SEQ = Self-Efficacy Questionnaire; PS = Procrastination Scale; LOCS = Locus of Control Scale.*

## Adaptation Process

### *Proneness to Academic Cheating Behaviours Questionnaire (PACBQ)*

The original PACBQ by Salehi and Gholampour (2021) was a 46-item questionnaire developed in Iran to measure attitudes and behaviours related to examination cheating among university students. For the purposes of this study, 18 items directly assessing cheating behaviours were identified as the most relevant subset. The following adaptations were made:

*Itemt one***:** The original instrument employed a second-person singular tone ("you"), which can feel accusatory and may induce socially desirable responding, particularly among adolescents. All items were reworded to first-person singular ("I") to encourage more honest self-reporting and align with standard self-report instrument conventions. For example, 'You look at other students' answer sheets' was adapted to 'I am willing to look at other students' test sheets and copy answers.'

*Item addition:* Two new items were developed and added to the adapted instrument, bringing the total to 20 items. These additional items reflect cheating behaviours specific to the Nigerian secondary school context, specifically, having a friend sign one's attendance sheet when absent, and studying from an examination paper that another student had dishonestly obtained. These behaviours were identified through a thorough review of the Nigerian academic cheating literature (Alhassan & Anya, 2017; Emaikwu, 2013).

*Response format:* The original instrument did not specify a scoring method. A five-point Likert response format was adopted: Always (5), Very Often (4), Sometimes (3), Rarely (2), Never (1). Experts in measurement and evaluation have argued that a five-point format provides sufficient discriminability while remaining cognitively manageable for adolescent respondents (Dawes, 2008; Krosnick & Presser, 2010).

*Scoring and interpretation:* A scoring framework was established based on the 20-item scale (minimum score = 20; maximum = 100): scores of 20–40 indicate low proneness; 41–60 indicate moderate proneness; and 61-100 indicate high proneness to academic cheating behaviour. This framework enables researchers to identify students requiring intervention.

### *Self-Efficacy Questionnaire (SEQ)*

The original SEQ by AbdulGafoor and Ashraf (2006) is a 40-item instrument measuring academic self-efficacy across three subscales: Academic Self-Efficacy, Social Self-Efficacy, and General Self-Efficacy. For this study, 25 items were selected from the original 40, based on their relevance to the academic context and their linguistic accessibility for Nigerian SS1 students.

*Item selection:* Items with overlapping content or those referencing social or general self-efficacy dimensions peripheral to academic cheating were removed. The 25 retained items focus on academic task performance, study behaviour, examination confidence, and help-seeking from teachers and peers.

*Response format:* The five-point response format of the original instrument was *retained*: Exactly True (5), Nearly True (4), Neutral (3), Nearly False (2), Exactly False (1). Negatively worded items (e.g., 'I cannot read and understand my textbooks well') are reverse-scored before summing, so that higher total scores consistently indicate higher self-efficacy.

*Linguistic adjustment:* Several items were simplified to ensure comprehension among SS1 *students* whose primary language of instruction may not be English. Complex sentence structures were broken down and technical language was replaced with simpler equivalents without altering the construct being measured.

### *Procrastination Scale (PS)*

The Procrastination Scale by Soares et al. (2022) is a 25-item Brazilian instrument measuring four dimensions of procrastination: Affective Procrastination, Cognitive Procrastination, Behavioural Procrastination, and Task Aversiveness. It was developed and validated with university students.

*Item selection:* 21 of the original 25 items were retained. Four items referencing university-specific contexts (e.g., doctoral submissions, seminar presentations) were removed as they did not apply to Nigerian secondary school students.

*Contextual reframing:* Several items were reworded to reflect secondary school academic tasks (tests, assignments, class projects) rather than university assessments. For example, references to 'thesis submission' were replaced with 'big project or assignment.'

*Response format:* A five-point Likert format was adopted: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), Strongly Disagree (1). Items assessing low procrastination (e.g., 'I avoid putting off projects until the last minute') were reverse-scored, ensuring that higher total scores indicate higher procrastination tendencies.

### *Locus of Control Scale (LOCS)*

The Locus of Control Scale developed by Trice (1985) is a 28-item instrument measuring the degree to which individuals attribute life outcomes to internal versus external causes. It was originally developed and validated with US college students.

*Item selection:* 20 of the original 28 items were retained. Eight items referencing college-specific contexts, American cultural norms, or concepts unlikely to be understood by Nigerian in-school adolescents were removed.

*Response format:* The original Yes/No dichotomous response format was retained, consistent with the author's original design and validated scoring procedure. This format was considered appropriate for measuring the binary nature of internal versus external locus of control attributions.

*Cultural contextualisation:* Items referencing academic performance, goal-setting, and motivation were retained and reworded where necessary to reflect Nigerian secondary school experiences. Items with culturally distant frames of reference (e.g., references to specific American academic or social institutions) were replaced or removed.

### *Validity and Reliability Procedures*

Content validity is the extent to which the items of an instrument adequately represent the domain of the construct being measured, and was established through expert review. The adapted battery was submitted to a panel of five academic experts in the faculty of education at the University of Lagos. The experts were asked to independently evaluate each instrument on the following criteria:

(i) clarity and comprehensibility of item wording for Nigerian in-school adolescents;
(ii) relevance of each item to the construct it purports to measure;
(iii) adequacy of coverage of the construct domain; and
(iv) appropriateness of the response format and scoring method.

Expert feedback was collated, analysed, and used to make final revisions to item wording, response format labels, and instruction clarity. Items flagged by two or more experts as unclear, irrelevant, or culturally inappropriate were revised or replaced. Across all four instruments, a total of approximately 14 items were flagged and subsequently revised, while no items were outright rejected, indicating that the initial adaptation work had produced items that were broadly appropriate but required linguistic or contextual refinement. To quantify inter-rater agreement among the five experts, item-level percentage agreement was calculated for

each instrument. Agreement rates exceeded 80% across all four instruments, consistent with the threshold recommended by Polit & Beck (2006) for acceptable content validity. These results provide evidence that the adapted instruments possess strong content validity for use with Nigerian in-school adolescents. The final versions of all four instruments were reviewed by the researcher before pilot administration.

Reliability is the consistency with which an instrument measures a construct across repeated administrations, and was assessed in this study using the test-retest method. The test-retest approach was deliberately chosen over internal consistency measures (such as Cronbach's alpha) because the constructs measured academic cheating proneness, self-efficacy, procrastination, and locus of control, are theoretically stable psychological traits rather than domain-sampling constructs; temporal stability is therefore the most theoretically appropriate index of reliability for these instruments (Kerlinger & Lee, 2000). It is acknowledged that internal consistency estimates such as Cronbach's alpha are conventionally reported in instrument validation studies. Future validation studies with larger samples should compute and report alpha alongside test-retest coefficients to provide a more comprehensive reliability profile. The adapted battery was administered to a pilot sample of 20 SS1 students from a public secondary school in Ilorin metropolis, Kwara State, Nigeria, who were not part of the main study sample. The same battery was re-administered to the same participants after a two-week interval, a duration considered sufficient to minimise memory effects while minimising the risk of true score change in the stable traits being measured (Kerlinger & Lee, 2000). The main study was subsequently conducted with 102 SS1 students selected through a multi-stage sampling procedure from public secondary schools in Kwara State, Nigeria. The two sets of pilot scores for each instrument were correlated using Pearson Product-Moment Correlation (PPMC). Table 2 presents the reliability coefficients obtained. The two sets of scores for each instrument were correlated using Pearson Product-Moment Correlation (PPMC). Table 2 presents the reliability coefficients obtained.

**Table 2:** Test-Retest Reliability Coefficients of the Adapted Instruments

| Instrument | Items | Response Format | Reliability Coefficient (r) | Interpretation |
|---|---|---|---|---|
| PACBQ | 20 | 5-point Likert | 0.89 | High |
| SEQ | 25 | 5-point Likert | 0.90 | High |
| PS | 21 | 5-point Likert | 0.90 | High |
| LOCS | 20 | Yes/No | 0.92 | Very High |

*Note: PACBQ = Proneness to Academic Cheating Behaviours Questionnaire; SEQ = Self-Efficacy Questionnaire; PS = Procrastination Scale; LOCS = Locus of Control Scale.*

All four instruments yielded reliability coefficients above the conventionally accepted threshold of 0.70 for research instruments (Nunnally & Bernstein, 1994), with three instruments exceeding 0.90. These results indicate that the adapted battery is highly reliable for use in measuring academic cheating proneness and its correlates among Nigerian in-school adolescents.

## Result and Discussion

### Description of the Final Adapted Battery

The final adapted battery comprises four instruments with a combined total of 86 items, designed to be administered in a single session of approximately 45 to 60 minutes. Table 3 provides a summary of the final battery.

**Table 3:** Summary of the Final Adapted Measurement Battery

| Instrument | Construct Measured | Items | Format | Score Range | Reliability |
|---|---|---|---|---|---|
| PACBQ | Proneness to academic cheating | 20 | 5-point Likert | 20–100 | 0.89 |
| SEQ | Academic self-efficacy | 25 | 5-point Likert | 25–125 | 0.90 |
| PS | Procrastination tendency | 21 | 5-point Likert | 21–105 | 0.90 |
| LOCS | Locus of control | 20 | Yes/No | 0–20 | 0.92 |

### *PACBQ: Scoring and Interpretation*

The PACBQ consists of 20 items rated on a five-point scale (Always = 5 to Never = 1). All items are positively keyed; higher scores indicate greater willingness to engage in cheating behaviours. The total score ranges from 20 to 100, with the following interpretive categories:

Low proneness: 20–40; Moderate proneness: 41–60; High proneness: 61–100.

This scoring framework enables researchers to classify participants and identify those in greatest need of counselling intervention. In the main study from which this battery was derived, participants with scores in the high proneness range (61–100) were selected as the target population for experimental intervention.

### *SEQ: Scoring and Interpretation*

The SEQ consists of 25 items rated on a five-point scale (Exactly True = 5 to Exactly False = 1). Negatively worded items are reverse-scored. Total scores range from 25 to 125, with higher scores indicating stronger academic self-efficacy beliefs. The instrument measures the degree to which students believe in their capacity to perform academic tasks independently, manage study demands, and succeed in examinations without resorting to dishonest means.

### *PS: Scoring and Interpretation*

The PS consists of 21 items rated on a five-point scale (Strongly Agree = 5 to Strongly Disagree = 1). Items indicating low procrastination (e.g., 'I avoid putting off projects until the last minute') are reverse-scored so that higher total scores consistently indicate higher procrastination tendencies. Total scores range from 21 to 105. The instrument covers four dimensions of procrastination: affective, cognitive, behavioural, and task aversiveness.

### *LOCS: Scoring and Interpretation*

The LOCS consists of 20 Yes/No items. Responses indicating an internal locus of control are scored 1, and those indicating an external locus are scored 0. Total scores range from 0 to 20, with higher scores reflecting a stronger internal locus of control. Students with predominantly external locus of control attributions (lower scores) are more susceptible to academic cheating behaviour (Anyanwu, 2020; Rinn et al., 2014).

## Discussions

The adaptation and validation of this four-instrument battery make several important and original contributions to educational measurement and counselling research in Nigeria. The battery addresses a critical gap in the Nigerian educational research landscape. While studies on academic cheating in Nigeria have proliferated in recent years (Hassan, 2016; Alhassan & Anya, 2017; Aderinto et al., 2021; Dejene, 2021), they have largely relied on instruments developed

in foreign contexts without systematic adaptation or validation. The psychometric properties reported in this paper, particularly the high reliability coefficients ranging from 0.89 to 0.92, confirm that the adapted instruments perform consistently and dependably with Nigerian in-school adolescents. With respect to the content validation process, expert review resulted in the revision of approximately 14 items across the four instruments (with no items rejected outright), and inter-rater agreement among the five expert reviewers exceeded 80% for all instruments, meeting accepted thresholds for content validity (Polit & Beck, 2006). Descriptive data from the pilot administration revealed that item responses were distributed across all response categories for each instrument, suggesting adequate item variability and the absence of floor or ceiling effects that might otherwise distort reliability estimates. Future validation studies should supplement these findings with formal descriptive statistics (means, standard deviations, and normality indices) from a larger normative sample.

Furthermore, the adaptation decisions made in this study reflect careful attention to the cultural and contextual specificities of academic cheating in Nigerian secondary schools. The addition of items reflecting Nigeria-specific cheating practices (such as using coded signals and having peers sign attendance sheets) to the PACBQ significantly improves the construct coverage of the instrument for this population. Similarly, the removal of items referencing university-specific or culturally distant scenarios from the SEQ, PS, and LOCS ensures that the adapted instruments measure their target constructs without introducing construct-irrelevant variance. Notably, the adapted versions of the instruments consistently yielded higher reliability coefficients than those reported for the original instruments (see Table 1 versus Table 2). Specifically, the adapted PACBQ achieved $r = 0.89$ compared to the original's $\alpha = 0.74$; the adapted SEQ yielded $r = 0.90$ against the original's $\alpha = 0.85$; and the adapted PS produced $r = 0.90$, matching the original's $\alpha = 0.90$. These improvements, particularly for the PACBQ, are plausibly attributable to several factors: the linguistic simplification of items reduced measurement error arising from comprehension difficulties; the removal of culturally irrelevant items eliminated construct-irrelevant variance; and the addition of Nigeria-specific cheating items strengthened the construct coverage of the PACBQ for this population. The relative homogeneity of the pilot sample, all drawn from a single school and grade level, may also have contributed to reduced within-group variance, which can inflate test-retest correlations; this should be examined in future multi-school studies (Nunnally & Bernstein, 1994).

Moreover, the creation of a coherent battery rather than isolated instruments provides researchers with a comprehensive measurement framework for studying the multi-dimensional psychological profile of students prone to academic cheating. The theoretical rationale grounding the battery in Social Cognitive Theory (Bandura, 2009) and Cognitive Behavioural Theory (Beck, 2011) ensures that the constructs measured are not only psychometrically sound but also theoretically meaningful and practically actionable. Recent scholarship reinforces the importance of this integrated approach: Novita and Jannah (2022) demonstrated that procrastination and self-efficacy together explained significantly more variance in cheating behaviour than either variable alone, while Owusu-Agyeman and Fourie-Malherbe (2023) emphasised that effective academic integrity interventions in African contexts must be theoretically grounded and psychometrically informed.

However, the content validity process involving expert review by five academics with specialisation in guidance, counselling, and educational measurement, provides an additional layer of assurance about the instruments' appropriateness for the target population. The iterative process of expert review, revision, and re-approval is consistent with best practices in instrument development and significantly strengthens the validity evidence for the battery.

Several limitations of the present validation study must be acknowledged. First, construct validity, particularly factorial validity and convergent/discriminant validity, was not assessed. Future studies should conduct confirmatory factor analysis (CFA) to verify the dimensional structure of each instrument and assess the degree to which the battery's constructs correlate in theoretically predicted patterns. Second, the pilot sample of 20 participants used for reliability

testing is relatively small; while the coefficients obtained are encouraging, larger pilot samples would yield more robust and generalisable reliability estimates. Third, the absence of Cronbach's alpha values means that internal consistency, a complementary and widely expected index of reliability, cannot be evaluated from the present data; future studies should report both alpha and test-retest coefficients. Fourth, the pilot sample was drawn from a single school in Ilorin, Kwara State, which limits the geographical representativeness of the reliability evidence. Fifth, the study did not test for measurement invariance across gender or subject streams, which is necessary before the battery can be used confidently for comparative subgroup analyses.

### Implications for Counselling Research and Practice

The validated battery has several direct implications for counselling research and practice in Nigerian secondary schools: The battery provides a ready-to-use, validated set of instruments for studying academic cheating proneness and its correlates among Nigerian secondary school students. Future experimental, correlational, or longitudinal studies can adopt the battery with confidence in its psychometric properties. Three specific research priorities are recommended. First, a confirmatory factor analysis (CFA) should be conducted with a minimum sample of $n \geq 300$ students drawn from at least three geopolitically distinct Nigerian states, to establish the factorial validity of each instrument and confirm the dimensional structure assumed during adaptation. Second, measurement invariance testing across gender and subject streams (Sciences, Arts, and Commercial) should be conducted to determine whether the instruments perform equivalently across subgroups before any comparative analyses are undertaken. Third, concurrent validity should be assessed by correlating battery scores with externally verifiable criterion variables, such as students' cumulative grade point averages (GPA) or official school records of academic sanctions (e.g., documented examination malpractice offences), to verify that the instruments predict real-world academic integrity outcomes in theoretically expected directions.

The PACBQ scoring framework (low, moderate, high proneness) offers a practical diagnostic tool for identifying students who are at high risk of engaging in academic cheating behaviour. Counsellors can administer the PACBQ as part of routine screening exercises and use the results to prioritise students for targeted counselling interventions such as psycho-education and cognitive restructuring. The battery can be used to conduct institutional audits of academic integrity culture, identifying patterns in cheating proneness, self-efficacy, procrastination, and locus of control across different classes, streams, or demographic groups. Such data can inform school-wide policies and programmes aimed at promoting academic integrity. The existence of a validated, Nigeria-specific measurement battery strengthens the evidence base for national-level policy decisions on academic integrity in secondary education. Ministries of Education and examination boards can use the battery as part of broader research programmes aimed at understanding and addressing examination malpractice in Nigeria.

## Conclusions

This paper has reported the systematic adaptation and psychometric validation of a four-instrument measurement battery for assessing academic cheating proneness, self-efficacy, procrastination, and locus of control among Nigerian in-school adolescents and, in doing so, makes a contribution that goes beyond the instruments themselves. The high reliability coefficients obtained ($r = 0.89$ to $0.92$ across all four adapted instruments), combined with content validity evidence from expert review and inter-rater agreement exceeding 80%, signal that Nigerian cheating research can now move from methodological improvisation to systematic, evidence-based measurement. To the best of the author's knowledge, this is the first published study to adapt and validate a coherent four-instrument battery targeting academic

cheating proneness and its interrelated psychological correlates, self-efficacy, procrastination, and locus of control, specifically for Nigerian in-school adolescents. This novelty is not merely procedural; it fills a gap that has silently undermined the scientific credibility of Nigerian academic integrity research for decades.

The study is not without limitations. The reliability evidence is based on a pilot sample of only 20 students from a single school in Kwara State, which constrains the generalisability of the psychometric data reported. Construct validity, including factorial, convergent, and discriminant validity, remains to be established through confirmatory factor analysis with larger, multi-state samples. Internal consistency coefficients (Cronbach's alpha) were not computed, representing a gap in the current reliability evidence base. Furthermore, measurement invariance across gender and subject streams has not yet been tested, limiting the battery's immediate applicability to subgroup comparisons. These limitations are acknowledged not to diminish the contribution of the present work, but to map clearly the validation pathway that remains ahead.

By providing the Nigerian educational research community with a validated, culturally grounded measurement framework, this paper strengthens the methodological infrastructure for academic integrity research in Nigeria. Future researchers are urged to build on this foundation in three targeted directions: conducting CFA with $n \geq 300$ students across at least three Nigerian states; testing measurement invariance across gender and subject streams; and establishing concurrent validity through correlation with GPA and academic sanction records. Beyond its research implications, the battery has direct practical utility: school counsellors can use the PACBQ's three-tier scoring framework (low, moderate, and high proneness) to identify at-risk students before national examinations and deploy targeted cognitive-restructuring and self-efficacy-building interventions with precision that was previously impossible without validated local instruments. A Nigerian educational research community equipped with validated, culturally grounded measurement tools is better positioned not only to understand the scale of academic dishonesty, but to dismantle the conditions that make it feel necessary.

## References


Alhassan, R. & Anya, V. (2017). Forms of academic cheating in examination in Nigerian schools. *Journal of Educational Research*, *12*(3), 44–52. https://doi.org/10.33094/6.2017.11.9.21.

Anyanwu, O. M. (2020). Locus of control and fresher undergraduates' participation tendency in examination malpractices in public universities in Ekiti state. *International Journal of Educational Research and Policy Making*, *3*(1), 353-360. https://doi.org/10.13140/ijerpm.03.01.353.

AbdulGafoor, K. & Ashraf, P. M. (2006). Academic self-efficacy scale: Secondary school students. ResearchGate. https://doi.org/10.13140/RG.2.1.3930.2640

Bandura, A. (1994). *Self-Efficacy. In V. S. Ramachaudran* (Ed.), Encyclopedia of Human Behavior (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman (Ed.) (1998). Encyclopedia of Mental Health. San Diego: Academic Press).

Bandura, A. (2009). Social Cognitive Theory of Mass Communication. In J. Bryant, & M. B. Oliver (Eds.), *Media Effects: Advances in Theory and Research* (pp. 94-124). Milton Park: Routledge.

Barzegar, K. & Khezri, H. (2012). Predicting academic cheating among the fifth grade students: The role of self-efficacy and academic self-handicapping. *Journal of Life Science Biomedical*, 2(1), 1–6. https://doi.org/10.54203.

Beck, J. S. (2011). Cognitive behaviour therapy: Basics and beyond (2nd ed.). The Guilford Press.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? *International Journal of Market Research*, 50(1), 61–104. https://doi.org/10.1177/147078530805000106.

Dejene, W. (2021). Academic cheating in Ethiopian secondary schools: Prevalence, perceived severity, and justifications. Cogent Education, 8(1), 1866803. https://doi.org/10.1080/2331186X.2020.1866803

Dimpka, D. I. (2011). Prevalence, causes and effects of academic corruption in Rivers State Universities. *Makerere Journal of Higher Education*, 3(1), 33–44. https://doi.org/10.4314/majohe.v3i1.4.

Emaikwu, S. O. (2013). Assessing the impact of examination malpractices on the measurement of ability in Nigeria. *International Journal of Social Science & Education*, 2(4), 748–757.

Finn, K. V. & Frone, M. R. (2004). Academic performance and cheating: Moderating role of school identification and self-efficacy. *Journal of Educational Research*, 97(3), 115–122. https://doi.org/10.3200/JOER.97.3.115-121.

Hambleton, R. K., Merenda, P. F. & Spielberger, C. D. (Eds.). (2005). Adapting educational and psychological tests for cross-cultural assessment. Lawrence Erlbaum.

Hassan, T. (2016). Psycho-educational factors of academic cheating. Paper presented at the faculty seminar, Department of Educational Foundations and Counselling, Olabisi Onabanjo University, Nigeria.

Kerlinger, F. N. & Lee, H. B. (2000). Foundations of behavioural research (4th ed.). Harcourt College Publishers.

Krosnick, J. A. & Presser, S. (2010). Question and questionnaire design. In P. V. Marsden & J. D. Wright (Eds.), Handbook of survey research (2nd ed.). Emerald Group Publishing.

Kumar, J. & Asha, K. (2016). A study of relationship between academic achievement and locus of control. *Scholarly Research Journal*, 1(3), 12–21.

Murdock, T. B., Hale, N. M. & Weber, M. J. (2001). Predictors of cheating among early adolescents: *Academic and social motivations. Contemporary Educational Psychology*, 26, 96–115. https://doi.org/10.1006/ceps.2000.1046.

Novita, N. & Jannah, F. (2022). How do fraud diamond and procrastination trigger cheating behaviour in online learning during the Covid-19 pandemic? The Indonesian Accounting Review, 12(2), 231–246. https://doi.org/10.14414/tiar.v12i2.2922.

Nunnally, J. C. & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

Polit, D.F., & Beck, C.T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, **29**, 489–497.

Rinn, A., Boazman, J., Jackson, A. & Barrio, B. (2014). Locus of control, academic self-concept, and academic dishonesty among high ability college students. *Journal of the Scholarship of Teaching and Learning*. https://doi.org/10.14434/v14i4.12770

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1–28. https://doi.org/10.1037/h0092976.

Salehi, M. & Gholampour, S. (2021). Cheating on exams: Investigating reasons, attitudes, and the role of demographic variables. *Sage Open Journal*, 1–9. https://doi.org/10.1177/2158244021100415

Soares, A. K. S., Coelho, G. L-H., Freires, L. A. & Nunes-da-Fonseca, P. (2022). Psychometric properties of the Academic Procrastination Scale (APS) in Brazil. *Journal of Psychoeducational Assessment*, 40(5), 634–648.

Transparency International. (2015). Corruption ruins lives — fight back: The global coalition against corruption. Transparency International.

Trice, A. D. (1985). An academic locus of control scale for college students. *Perceptual and Motor Skills*, 61(3), 1043–1046. https://doi.org/10.2466/pms.1985.61.3f.1043

Omondi, P. A. & Ayodo, T. M. O. (2022). Examination malpractice in public secondary schools in Kenya: Causes, effects and intervention strategies. *Journal of Education and Practice*, 13(6), 45–54.

Owusu-Agyeman, Y. & Fourie-Malherbe, M. (2023). Academic integrity in African higher education: Emerging challenges and institutional responses. *Higher Education Research & Development*, 42(3), 712–727.

## Appendix A

**Proneness to Academic Cheating Behaviours Questionnaire (PACBQ)**

Dear Respondent, this questionnaire is designed to obtain information on your proneness to academic cheating behaviours. There are no wrong or right answers. All information provided will be treated with utmost confidentiality and used for research purposes only. Thank you for your cooperation.

**Section A: Personal Information**

Gender: Male ( ) Female ( )

Age: 11–15 ( ) 16–20 ( )

Subject Stream: Science ( ) Arts ( ) Commercial ( )

**Section B: Cheating Behaviour Items**

*Instruction: Please indicate by ticking (√) how often you are willing to engage in the following behaviours.*

*Rating: Always (A) | Very Often (VO) | Sometimes (S) | Rarely (R) | Never (N)*

| S/N | Statement | A | VO | S | R | N |
|---|---|---|---|---|---|---|
| 1 | Look at other students' test sheets and copy answers | | | | | |
| 2 | Use notes written on pieces of paper | | | | | |
| 3 | Use notes written on various parts of my body such as palms or wrists | | | | | |
| 4 | Talk to neighbouring students to get answers | | | | | |
| 5 | Use different signs to get answers from other students | | | | | |
| 6 | Change the answer sheet with other classmates | | | | | |
| 7 | Use cell phones and communication tools like text messages, Bluetooth, hands-free, and so on | | | | | |
| 8 | Let others look at my answer sheet | | | | | |
| 9 | Change my pencil and eraser with written answers on them, put rolled pieces of paper inside a pen tube, or use similar stationery | | | | | |
| 10 | Save educational material in a calculator or other digital instruments | | | | | |
| 11 | Use resources and tests of past years obtained without permission | | | | | |
| 12 | Ask others to take the test instead of me (impersonation) | | | | | |
| 13 | Use my subject notes or books at the examination session | | | | | |
| 14 | Get the examination questions before the examination date | | | | | |
| 15 | Bribe the proctors or invigilators | | | | | |
| 16 | Ask the proctors direct questions about examination answers | | | | | |
| 17 | Put slips of paper inside long hair | | | | | |
| 18 | Write answers to questions on a handkerchief and pretend to cough while reading it during the examination | | | | | |
| 19 | Have a friend sign my name on an attendance sheet when I did not actually attend class | | | | | |
| 20 | Study from an examination paper that someone else obtained dishonestly | | | | | |

Scoring: Always = 5, Very Often = 4, Sometimes = 3, Rarely = 2, Never = 1

Interpretation: 20–40 = Low Proneness | 41–60 = Moderate Proneness | 61–100 = High Proneness.

**Appendix B**
**Self-Efficacy Questionnaire (SEQ)**

This questionnaire measures your beliefs about your ability to perform academic tasks. Please respond honestly based on your personal experience.

*Instruction: Please indicate the most applicable to you by ticking (√) under the appropriate column. Rating: Exactly True (ET) | Nearly True (NT) | Neutral (N) | Nearly False (NF) | Exactly False (EF)*

| S/N | Statement | ET | NT | N | NF | EF |
|---|---|---|---|---|---|---|
| 1 | Irrespective of the subject, I am competent in learning | | | | | |
| 2 | I cannot read and understand my textbooks well | | | | | |
| 3 | I sense that I am quick to pick up points from what I read | | | | | |
| 4 | I feel that I have no ability to keep things in memory | | | | | |
| 5 | I can do my projects well | | | | | |
| 6 | I cannot manage time efficiently for learning | | | | | |
| 7 | I can arrange the help of my teachers in learning | | | | | |
| 8 | I fail to find the necessary sources for my study | | | | | |
| 9 | I can arrange the help of my peers for my learning whenever I need it | | | | | |
| 10 | I fail to set higher goals in my study | | | | | |
| 11 | I can usually find quite a few solutions when I encounter problems in my study | | | | | |
| 12 | I cannot express ideas well while attending examinations | | | | | |
| 13 | It is difficult for me to read and understand textbooks in English | | | | | |
| 14 | During examinations, I can recollect what I have learnt | | | | | |
| 15 | I often fail to comprehend the actual meaning of what I study | | | | | |
| 16 | If taught, I can prepare my class notes neatly | | | | | |
| 17 | I fail to find time for learning in the midst of other chores | | | | | |
| 18 | I cannot arrange the resources of my study from relatives, neighbours, etc. | | | | | |
| 19 | I am confident that I have friends who would be helpful in my study | | | | | |
| 20 | I may not clarify doubts from my teachers while in class | | | | | |
| 21 | I can accomplish my aims in learning | | | | | |
| 22 | I cannot answer essay type questions well | | | | | |
| 23 | I feel that I am weak in understanding what my teachers teach in class | | | | | |
| 24 | I can develop the reading skill required to learn school subjects | | | | | |
| 25 | When I study a new concept, I cannot recall related knowledge from earlier classes | | | | | |

Scoring: Exactly True = 5, Nearly True = 4, Neutral = 3, Nearly False = 2, Exactly False = 1
Note: Negatively worded items are reverse-scored before summing. Higher scores indicate stronger academic self-efficacy.

**Appendix C**
**Procrastination Scale (PS)**

This scale measures your tendency to delay or postpone academic tasks. Please respond based on your typical behaviour.

*Instruction: Please indicate the most applicable to you by ticking (√) under the appropriate column. Rating: Strongly Agree (SA) | Agree (A) | Neutral (N) | Disagree (D) | Strongly Disagree (SD)*

| S/N | Statement | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 1 | I usually allocate time to review and proofread my work | | | | | |
| 2 | I concentrate on school work instead of other distractions | | | | | |
| 3 | I feel prepared well in advance for most tests | | | | | |
| 4 | I allocate time so I do not have to cram at the end of the semester | | | | | |
| 5 | I read the textbook and look over notes before coming to class | | | | | |
| 6 | I avoid putting off projects until the last minute | | | | | |
| 7 | I avoid waiting until the day before to start a big project | | | | | |
| 8 | I ensure to complete my school work on time | | | | | |
| 9 | When working on school work, I usually do not get distracted by other things | | | | | |
| 10 | I avoid wasting a lot of time on unimportant things | | | | | |
| 11 | Tests are meant to be studied for just the night before | | | | | |
| 12 | I feel prepared well in advance for most tests | | | | | |
| 13 | I allocate time so I do not have to cram at the end of the semester | | | | | |
| 14 | If an assignment is due at midnight, I will work on it until 11:59 | | | | | |
| 15 | On weekends, I make plans to do homework and projects | | | | | |
| 16 | Cramming and last minute studying is not the best way I study for a big test | | | | | |
| 17 | I also study the night before exams | | | | | |
| 18 | When given an assignment, I hardly put it away and forget about it until it is almost due | | | | | |
| 19 | Friends cannot distract me from schoolwork | | | | | |
| 20 | I find myself not talking to friends or family instead of working on school work | | | | | |
| 21 | I rarely put off things for the next day | | | | | |

Scoring: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly Disagree = 1
Note: Positively worded items (e.g., items 1–10, 15–16, 18–21) are reverse-scored. Higher total scores indicate higher procrastination tendencies.

**Appendix D**
**Locus of Control Scale (LOCS)**

This scale measures the degree to which you believe you are in control of the events and outcomes in your academic life. Please respond honestly.

*Instruction: Please indicate the most applicable to you by ticking (√) either Yes or No for each statement below.*

| S/N | Statement | Yes | No |
|---|---|---|---|
| 1 | College grades most often reflect the effort you put into classes | | |
| 2 | I have largely determined my own career goals | | |
| 3 | I never feel really hopeless; there is always something I can do to improve my situation | | |
| 4 | I would never allow social activities to affect my studies | | |
| 5 | Studying every day is important | | |
| 6 | I consider myself highly motivated to achieve success in life | | |
| 7 | I am a good writer | | |
| 8 | I have been known to spend a lot of time making decisions which others do not take seriously | | |
| 9 | I feel I will someday make a real contribution to the world if I work hard at it | | |
| 10 | I plan well and I stick to my plans | | |
| 11 | There are no subjects in which I could never do well | | |
| 12 | I would never allow social activities to affect my studies | | |
| 13 | I rarely talk myself out of studying | | |
| 14 | I am rarely distracted from my studies | | |
| 15 | Doing work on time is always important to me | | |
| 16 | I consider myself highly motivated to achieve success in life | | |
| 17 | Things will not always go wrong for me in the near future | | |
| 18 | I feel I will someday make a real contribution to the world if I work hard at it | | |
| 19 | There is no subject in which I could not do well | | |
| 20 | I came to school because I personally wanted to, not just because it was expected of me | | |

Scoring: Responses indicating internal locus of control = 1; external locus of control = 0. Higher total scores (maximum = 20) reflect a stronger internal.