

AN APPRAISAL OF EVALUATION TECHNIQUES IN PHYSICAL AND HEALTH EDUCATION: IMPLICATIONS FOR TEACHING AND LEARNING OUTCOMES IN NIGERIAN UNIVERSITIES.

Abstract:

*This study examined the appraisal of evaluation techniques in Physical and Health Education and their implications for teaching and learning outcomes in Nigerian universities. The study was guided by three research questions and three null hypotheses. A descriptive survey research design was adopted for the study. The population consisted of 1,250 respondents comprising 150 Physical and Health Education lecturers and 1,100 undergraduate students from selected Nigerian universities. A sample size of 400 respondents, consisting of 80 lecturers and 320 students, was selected using a multi-stage sampling procedure. Data were collected using a researcher-developed questionnaire titled “**Evaluation Techniques and Teaching-Learning Outcomes Questionnaire (ETTLOQ)**.” The instrument was validated by experts in Physical and Health Education, Measurement and Evaluation, and Educational Research, and a reliability coefficient of 0.82 was obtained using Cronbach’s Alpha method. Mean and standard deviation were used to answer the research questions, while Pearson Product Moment Correlation and regression analysis were used to test the hypotheses at 0.05 level of significance. The findings revealed that written examinations, practical performance tests, observation methods, continuous assessment, and peer/self-assessment were commonly used evaluation techniques in Physical and Health Education programmes, while digital assessment tools were less utilized. The study further found a significant positive relationship between evaluation techniques and teaching effectiveness ($r = 0.63, p < 0.05$) and between evaluation techniques and students’ learning outcomes ($r = 0.71, p < 0.05$). Regression analysis showed that evaluation techniques significantly predicted learning outcomes ($F = 45.82, p < 0.05$). The study concluded that effective evaluation practices enhance instructional quality and improve students’ competencies, skills, and academic achievement. It was recommended that universities should promote diverse assessment approaches, strengthen lecturers’ assessment capacity, and integrate technology-based evaluation methods into Physical and Health Education programmes.*

Keywords: Evaluation Techniques, Physical And Health Education, Teaching Effectiveness, Learning Outcomes, Assessment Practices, Nigerian Universities.

Introduction

Evaluation is a fundamental component of the teaching and learning process because it provides systematic information about learners' knowledge, skills, attitudes, and overall achievement. In Physical and Health Education (PHE), evaluation goes beyond measuring academic knowledge; it involves assessing physical skills, motor performance, health behaviours, fitness levels, participation, and practical competencies required for lifelong wellness. Effective evaluation techniques enable lecturers to determine the extent to which instructional objectives have been achieved and provide feedback for improving teaching practices and students' learning experiences. Recent scholarship emphasizes that assessment in physical education should support learning by providing continuous feedback, encouraging learner involvement, and aligning assessment practices with intended learning outcomes (Chng& Lund, 2018).

In Nigerian universities, Physical and Health Education programmes are designed to develop competent professionals who can promote physical activity, health awareness, sports development, and wellness education. However, achieving these goals depends greatly on the quality of evaluation techniques adopted by lecturers. Traditional assessment approaches such as written examinations, practical demonstrations, skill tests, observation schedules, assignments, and fitness assessments are commonly used to measure students' performance. While these approaches provide useful information, concerns have emerged regarding their effectiveness, objectivity, reliability, and ability to capture diverse learning outcomes in physical education settings.

Evaluation techniques in PHE can generally be categorized into formative and summative approaches. Formative evaluation focuses on monitoring students' progress during instruction through feedback, self-assessment, peer assessment, and continuous observation, while

summative evaluation measures achievement at the end of an instructional period through examinations, practical tests, and grading systems. Contemporary research indicates that formative assessment practices can enhance student engagement, self-regulation, and motor learning because they allow learners to understand their strengths and areas requiring improvement (Müller & Wagner, 2026).

The emergence of technology has further transformed evaluation practices in physical education. Digital assessment tools, video analysis, artificial intelligence applications, and online feedback systems are increasingly being explored to improve accuracy and personalization of assessment. These innovations provide opportunities for real-time feedback and improved monitoring of students' movement skills and learning progress (Huang, Hsia, & Hwang, 2026). However, many Nigerian universities still experience challenges such as inadequate technological facilities, limited assessment training among lecturers, large class sizes, and inconsistent application of standardized evaluation procedures.

The quality of evaluation techniques has direct implications for teaching effectiveness and learning outcomes. When assessment methods accurately measure students' competencies, lecturers can modify instructional strategies, identify learning difficulties, and improve curriculum delivery. Conversely, inappropriate evaluation practices may lead to inaccurate judgments of students' abilities and reduced motivation. Studies in physical education indicate that assessment remains a complex area because teachers often struggle with balancing practical skill measurement, fairness, student participation, and achievement standards (Barker, Tolgfors, & Caldeborg, 2025).

Learning outcomes in PHE include cognitive development, psychomotor skills, affective behaviours, physical fitness, teamwork, and health-related competencies. Therefore, evaluation techniques must be comprehensive enough to capture these multiple dimensions. A well-designed evaluation system should combine different assessment strategies to ensure that students are assessed holistically rather than based solely on theoretical knowledge or isolated performance tests.

Despite the importance of evaluation in PHE, limited empirical attention has been given to examining the effectiveness of evaluation techniques used in Nigerian universities and their implications for teaching and learning outcomes. This study therefore seeks to appraise evaluation techniques in Physical and Health Education and determine how they influence instructional effectiveness and students' learning outcomes in Nigerian universities.

Statement of the Problem

Physical and Health Education in Nigerian universities plays a significant role in preparing professionals capable of promoting health, physical activity, and sports development. However, concerns have been raised about the adequacy and effectiveness of evaluation practices used in assessing students' competencies. Many lecturers continue to depend heavily on conventional assessment methods, which may not sufficiently measure practical skills, behavioural changes, creativity, and other essential learning outcomes.

Furthermore, inconsistencies in evaluation procedures, limited use of innovative assessment approaches, inadequate assessment resources, and insufficient training on modern evaluation techniques may affect the accuracy of students' performance measurement. When evaluation

methods fail to reflect actual learning achievement, teaching decisions may become less effective and students may not receive appropriate feedback for improvement.

The problem, therefore, is that despite the importance of evaluation in achieving quality teaching and learning outcomes, there is insufficient evidence regarding the effectiveness of existing evaluation techniques in Physical and Health Education programmes within Nigerian universities. This study addresses this gap by examining the prevailing evaluation techniques and their implications for instructional practices and students' learning outcomes.

Purpose of the Study

The main purpose of this study is to appraise evaluation techniques in Physical and Health Education and determine their implications for teaching and learning outcomes in Nigerian universities. Specifically, the study seeks to:

1. Identify the major evaluation techniques used in Physical and Health Education programmes in Nigerian universities.
2. Examine the relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers.
3. Determine the influence of evaluation techniques on students' learning outcomes in Physical and Health Education.

Research Questions

The following research questions guided the study:

1. What are the major evaluation techniques used in Physical and Health Education programmes in Nigerian universities?
2. What relationship exists between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities?
3. To what extent do evaluation techniques influence students' learning outcomes in Physical and Health Education programmes?

Research Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

H01: There is no significant relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities.

H02: There is no significant relationship between evaluation techniques and students' learning outcomes in Physical and Health Education programmes.

H03: Evaluation techniques do not significantly predict learning outcomes among students in Physical and Health Education programmes in Nigerian universities.

Literature Review

Concept of Evaluation in Physical and Health Education

Evaluation is a systematic process of collecting, analyzing, and interpreting information about learners' knowledge, skills, attitudes, and performance to determine the extent to which educational objectives have been achieved. In education, evaluation provides evidence for

140 decision-making, instructional improvement, curriculum modification, and learner development.
141 In Physical and Health Education (PHE), evaluation assumes a broader meaning because
142 learning involves cognitive understanding, psychomotor performance, physical fitness, social
143 interaction, and health-related behaviours. Therefore, effective evaluation in PHE must
144 incorporate methods capable of assessing both theoretical knowledge and practical
145 competencies.

146 Physical and Health Education differs from many academic disciplines because students are
147 expected to demonstrate observable skills such as movement coordination, sports techniques,
148 fitness abilities, teaching competence, and application of health principles. Consequently,
149 evaluation techniques must move beyond conventional written examinations to include practical
150 demonstrations, observation, performance tasks, and continuous assessment approaches. Chng
151 and Lund (2018) emphasized that assessment in physical education has shifted from focusing
152 mainly on scores and fitness testing toward approaches that assess students' skills, knowledge,
153 participation, and improvement through meaningful learning experiences.

154 In Nigerian universities, evaluation remains a critical component of Physical and Health
155 Education programmes because it determines whether graduates possess the professional
156 competencies required for teaching, coaching, sports management, and health promotion. The
157 effectiveness of these programmes depends largely on the ability of lecturers to apply
158 appropriate evaluation techniques that reflect the objectives of the curriculum.

159 **Concept of Evaluation Techniques**

160 Evaluation techniques refer to the various methods, strategies, and instruments used by educators
161 to measure students' learning achievement and determine the effectiveness of instruction. In
162 Physical and Health Education, evaluation techniques include written tests, practical skill
163 assessment, observation methods, fitness assessments, projects, portfolios, peer assessment, self-
164 assessment, and digital assessment tools.

165 Traditional evaluation techniques such as written examinations are useful for measuring
166 students' understanding of theoretical concepts including anatomy, physiology, health education
167 principles, sports rules, and educational theories. However, written examinations alone cannot
168 sufficiently measure psychomotor skills and practical abilities. This limitation has encouraged
169 the adoption of performance-based evaluation approaches that allow students to demonstrate
170 actual competence.

171 According to Müller and Wagner (2026), contemporary assessment practices in physical
172 education increasingly emphasize formative assessment approaches that provide continuous
173 feedback, encourage student involvement, and support motor learning. Their review indicated
174 that digital tools such as video analysis and technology-supported feedback systems can
175 strengthen assessment practices by improving the monitoring of students' physical skills and
176 learning progress.

177 Evaluation techniques are therefore expected to be valid, reliable, objective, and capable of
178 measuring different dimensions of learning. In university Physical and Health Education
179 programmes, the selection of appropriate techniques is essential for ensuring accurate assessment
180 of students' competencies.

Types of Evaluation Techniques in Physical and Health Education

Formative Evaluation

Formative evaluation refers to assessment conducted during the teaching-learning process to monitor students' progress and provide feedback for improvement. It includes classroom questioning, practical demonstrations, peer assessment, self-assessment, observation, and continuous performance monitoring.

Formative evaluation is particularly relevant in Physical and Health Education because physical skills develop progressively through practice, correction, and feedback. Through formative assessment, lecturers can identify students' weaknesses and provide immediate support to improve performance.

Research has shown that formative assessment contributes positively to teaching and learning because it transforms assessment from a grading activity into a learning-support process. Slingerland, Weeldenburg, and Borghouts (2024) reported that formative assessment in physical education improves transparency of learning objectives, increases student involvement, and supports more effective instructional practices, although successful implementation requires adequate teacher assessment competence.

Summative Evaluation

Summative evaluation is conducted at the end of an instructional period to determine the overall level of achievement. Examples include final examinations, semester assessments, practical examinations, and certification tests.

In Physical and Health Education, summative evaluation is important for grading, promotion, and certification purposes. However, excessive dependence on summative evaluation may limit opportunities for feedback and continuous improvement. Modern educational assessment encourages combining summative and formative approaches to achieve a balanced evaluation system.

Authentic Assessment

Authentic assessment involves evaluating students' ability to apply knowledge and skills in realistic situations. In PHE, authentic assessment may include coaching demonstrations, teaching practice, sports performance, health campaigns, fitness programmes, and practical projects.

Authentic assessment is considered effective because it reflects real-life professional demands. Physical Education graduates are expected to apply skills in practical environments; therefore, assessment should measure their ability to perform tasks rather than only recall information.

Recent literature indicates that effective assessment in physical education requires alignment between learning objectives, teaching activities, and assessment criteria to ensure fairness and meaningful measurement of competencies.

Digital and Technology-Based Evaluation

Technological advancement has introduced new possibilities for evaluating learning outcomes in Physical and Health Education. Digital assessment tools include video-based performance analysis, wearable devices, online assessment platforms, artificial intelligence applications, and movement tracking systems.

221 Digital assessment improves accuracy because it allows detailed analysis of movement patterns,
222 performance changes, and individual learning progress. Müller and Wagner (2026) observed that
223 technology-supported formative assessment enhances motor learning by providing immediate
224 feedback and encouraging learner autonomy.

225 In Nigerian universities, however, the adoption of digital evaluation techniques may be limited
226 by inadequate infrastructure, insufficient technological skills among lecturers, and financial
227 constraints. Addressing these challenges is important for improving assessment quality.

228 **Evaluation Techniques and Teaching Effectiveness in Physical and Health Education**

229 Teaching effectiveness refers to the extent to which lecturers successfully facilitate learning,
230 deliver instruction, provide feedback, and achieve educational objectives. Evaluation techniques
231 influence teaching effectiveness because assessment results provide lecturers with information
232 about students' understanding and performance.

233 Effective evaluation enables lecturers to identify learning difficulties and modify instructional
234 strategies. For example, poor performance in practical skills may indicate the need for additional
235 demonstrations, practice sessions, or alternative teaching approaches.

236 Assessment also promotes lecturer reflection. When evaluation results reveal patterns of student
237 achievement or failure, lecturers can review their teaching methods and improve instructional
238 delivery. Therefore, evaluation serves not only as a measure of students' performance but also as
239 a tool for improving teaching quality.

240 **Evaluation Techniques and Students' Learning Outcomes**

Learning outcomes represent the knowledge, skills, attitudes, and competencies acquired by students after an educational experience. In Physical and Health Education, learning outcomes include physical fitness, motor skills, health knowledge, teamwork, leadership abilities, and professional competence.

Appropriate evaluation techniques contribute to improved learning outcomes because they provide feedback, encourage participation, and motivate students toward improvement. When students understand assessment criteria, they are more likely to engage actively in learning activities.

Peer assessment and self-assessment approaches have also gained attention because they encourage students to become active participants in evaluating their own progress. Research indicates that assessment approaches involving reflection and feedback can strengthen learner responsibility and improve achievement.

However, ineffective assessment practices may negatively affect learning outcomes. For instance, relying only on written examinations may fail to identify students with strong practical abilities, while inconsistent assessment procedures may reduce students' confidence and motivation.

Challenges Affecting Evaluation Practices in Nigerian Universities

Despite the importance of evaluation techniques, several factors affect effective implementation in Nigerian universities. These challenges include inadequate sports facilities, limited assessment resources, large student populations, insufficient lecturer training, and reliance on traditional examination methods.

Another major challenge is limited assessment literacy among some lecturers. Effective evaluation requires knowledge of test construction, performance assessment, feedback strategies, and interpretation of assessment results. Without adequate training, lecturers may continue using assessment methods that do not fully capture students' competencies.

Technology integration also remains a challenge. Although digital assessment provides opportunities for improved measurement and feedback, many universities experience difficulties related to equipment availability, internet access, and technical expertise.

Constructivist Learning Theory

This study is anchored on Constructivist Learning Theory, which views learning as an active process where learners construct knowledge through experiences, interaction, and reflection. The theory suggests that students learn effectively when they participate actively in meaningful activities.

The theory supports the use of diverse evaluation techniques in Physical and Health Education because students develop competencies through practice, feedback, and real-life experiences. Practical assessments, peer evaluation, and formative feedback reflect constructivist principles because they encourage active participation and continuous improvement.

Methodology

The study adopted a descriptive survey research design because it was considered appropriate for examining the evaluation techniques used in Physical and Health Education and determining their implications for teaching effectiveness and students' learning outcomes in Nigerian universities. The design enabled the researcher to collect data from respondents regarding

existing evaluation practices, experiences, and perceptions without manipulating the variables under investigation. Descriptive survey design is suitable for educational research because it allows researchers to describe prevailing conditions and examine relationships among variables within a population.

The study was carried out in selected Nigerian universities offering Physical and Health Education programmes. The institutions were selected because they provide professional training in physical education, sports science, and health education. The study focused on Physical and Health Education lecturers and undergraduate students because both groups are directly connected to evaluation practices. Lecturers are responsible for selecting and implementing assessment techniques, while students experience the assessment procedures and provide information regarding how evaluation influences their learning outcomes.

The population of the study consisted of 1,250 respondents, comprising 150 Physical and Health Education lecturers and 1,100 undergraduate students from selected Nigerian universities. A sample size of 400 respondents was selected for the study. The sample consisted of 80 lecturers and 320 undergraduate students. The sample size was considered adequate because it provided sufficient representation of the population and allowed appropriate statistical analysis of the study variables. The respondents were selected using a multi-stage sampling procedure. In the first stage, universities offering Physical and Health Education programmes were selected through purposive sampling. In the second stage, lecturers and students were selected using proportionate stratified random sampling to ensure fair representation of the different respondent categories.

The instrument used for data collection was a researcher-developed questionnaire titled “Evaluation Techniques and Teaching-Learning Outcomes Questionnaire (ETTLOQ).” The questionnaire was divided into four sections. Section A collected demographic information of respondents, Section B focused on evaluation techniques used in Physical and Health Education programmes, Section C examined the relationship between evaluation techniques and teaching effectiveness, while Section D assessed the influence of evaluation techniques on students’ learning outcomes. The items were structured using a four-point Likert scale of Strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree (D) – 2 points, and Strongly Disagree (SD) – 1 point.

The instrument was validated by three experts comprising one specialist in Physical and Health Education, one specialist in Measurement and Evaluation, and one expert in Educational Research. The experts assessed the questionnaire items based on relevance, clarity, adequacy, and alignment with the objectives of the study. Their recommendations were used to modify and improve the final version of the instrument before administration.

A pilot study was conducted using 40 respondents from a university outside the selected study institutions to determine the reliability of the instrument. The reliability coefficient of the questionnaire was established using Cronbach’s Alpha method, and a coefficient value of 0.82 was obtained, indicating that the instrument was reliable for the study.

The researcher personally administered the questionnaires with the assistance of trained research assistants. The purpose of the study was explained to respondents, and they were assured that participation was voluntary and that information provided would be treated confidentially.

Completed questionnaires were collected immediately after completion to ensure a high return rate.

The data collected were analyzed using descriptive and inferential statistics. Mean and standard deviation were used to answer the research questions, while Pearson Product Moment Correlation was employed to test hypotheses one and two. Multiple regression analysis was used to test hypothesis three at a 0.05 level of significance. The decision rule was that hypotheses were rejected when the probability value was less than 0.05 and accepted when the probability value was greater than 0.05.

Ethical considerations were maintained throughout the study. Respondents were informed about the purpose of the research, participation was voluntary, and confidentiality and anonymity of responses were ensured.

Results and Data Analysis

This section presents the results of the data collected from respondents on the appraisal of evaluation techniques in Physical and Health Education and their implications for teaching and learning outcomes in Nigerian universities. The data were analyzed using mean, standard deviation, Pearson Product Moment Correlation, and regression analysis. A total of 400 questionnaires were administered, and 382 copies were properly completed and used for analysis, representing a 95.5% response rate.

The decision rule for answering the research questions was based on a criterion mean of 2.50. Any item with a mean score of 2.50 and above was regarded as Agree, while items below 2.50 were regarded as Disagree.

Research Question One: What are the major evaluation techniques used in Physical and Health Education programmes in Nigerian universities?

Table 1: Mean and Standard Deviation of Evaluation Techniques Used in Physical and Health Education

S/N	Item Statement	Mean ($\bar{x}$)	SD	Remark
1	Lecturers use written examinations to assess students' understanding of theoretical concepts in Physical and Health Education.	3.42	0.61	Agree
2	Practical performance tests are used to assess students' physical skills and competencies.	3.51	0.57	Agree
3	Observation methods are used during practical activities to evaluate students' performance.	3.38	0.64	Agree
4	Continuous assessment activities such as assignments and quizzes are commonly used.	3.45	0.59	Agree
5	Peer and self-assessment techniques are applied to improve students' involvement in learning.	2.84	0.81	Agree
6	Digital assessment tools are used for evaluating students' performance in Physical Education activities.	2.46	0.86	Disagree

Grand Mean = 3.18

Table 1 presents the mean and standard deviation scores of respondents' opinions on the evaluation techniques used in Physical and Health Education programmes in Nigerian universities. The results show that most of the evaluation techniques identified recorded mean scores above the criterion mean of 2.50, indicating that respondents agreed that these assessment approaches are commonly used by lecturers.

The highest mean score was recorded for the statement that practical performance tests are used to assess students' physical skills and competencies with a mean score of 3.51 and standard deviation of 0.57. This indicates that practical assessment is a major evaluation approach in Physical and Health Education because the discipline requires students to demonstrate physical abilities, motor skills, and practical competence.

361 The statement that continuous assessment activities such as assignments and quizzes are
362 commonly used recorded a mean score of 3.45 with a standard deviation of 0.59. This suggests
363 that lecturers utilize continuous assessment to monitor students' progress and provide
364 opportunities for improvement throughout the learning process.

365 Similarly, respondents agreed that written examinations are used to assess students'
366 understanding of theoretical concepts ($\bar{x} = 3.42$, $SD = 0.61$). This indicates that although
367 Physical and Health Education is practical-oriented, theoretical knowledge remains an important
368 component of students' assessment.

369 The use of observation methods during practical activities recorded a mean score of 3.38 with a
370 standard deviation of 0.64, showing that lecturers also rely on direct observation to assess
371 students' performance, participation, and application of skills during physical activities.

372 The finding further revealed that peer and self-assessment techniques are applied to improve
373 students' involvement in learning with a mean score of 2.84 and standard deviation of 0.81.
374 Although respondents agreed with this statement, the relatively lower mean score suggests that
375 these learner-centred assessment approaches may not be as widely practiced compared with
376 traditional assessment methods.

377 However, the statement that digital assessment tools are used for evaluating students'
378 performance in Physical Education activities recorded a mean score of 2.46 with a standard
379 deviation of 0.86, which falls below the criterion mean of 2.50. This indicates that digital and
380 technology-based assessment tools are not commonly utilized in Physical and Health Education
381 programmes. The finding may be associated with challenges such as inadequate technological

infrastructure, limited access to digital resources, and insufficient training in technology-supported assessment.

The overall grand mean of 3.18 indicates that a variety of evaluation techniques are used in Physical and Health Education programmes in Nigerian universities. However, the results suggest the need for increased adoption of innovative assessment methods, particularly digital evaluation approaches, to complement existing traditional assessment practices.

Research Question Two: What relationship exists between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities?

Table 2: Mean and Standard Deviation of Evaluation Techniques and Teaching Effectiveness

S/N	Item Statement	Mean ($\bar{x}$)	SD	Remark
1	Evaluation results help lecturers identify students' learning difficulties.	3.56	0.55	Agree
2	Assessment feedback improves lecturers' instructional strategies.	3.49	0.60	Agree
3	Appropriate evaluation techniques help lecturers achieve instructional objectives.	3.52	0.58	Agree
4	Evaluation practices encourage lecturers to improve teaching methods.	3.41	0.63	Agree
5	Poor evaluation procedures reduce the effectiveness of teaching and learning activities.	3.37	0.66	Agree

Grand Mean = 3.47

Table 2 presents the mean and standard deviation scores of respondents' views on the relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities. The results indicate that all the items recorded mean scores above the criterion mean of 2.50, showing that respondents agreed that evaluation techniques contribute significantly to teaching effectiveness.

398 The highest mean score was recorded for the statement that evaluation results help lecturers
399 identify students' learning difficulties with a mean score of 3.56 and standard deviation of 0.55.
400 This implies that respondents agreed that assessment outcomes provide valuable information that
401 enables lecturers to understand students' challenges and provide appropriate instructional
402 support.

403 The statement that appropriate evaluation techniques help lecturers achieve instructional
404 objectives recorded a mean score of 3.52 with a standard deviation of 0.58. This indicates that
405 effective assessment practices assist lecturers in determining whether teaching activities have
406 achieved the intended goals and in making necessary improvements where required.

407 Respondents also agreed that assessment feedback improves lecturers' instructional strategies ($\bar{x}$
408 = 3.49, SD = 0.60). This suggests that feedback obtained through evaluation enables lecturers to
409 modify teaching approaches, improve lesson delivery, and respond effectively to students'
410 learning needs.

411 The finding further revealed that evaluation practices encourage lecturers to improve teaching
412 methods ($\bar{x}$ = 3.41, SD = 0.63). This indicates that assessment serves as a reflective tool that
413 encourages lecturers to review their instructional practices and adopt more effective teaching
414 approaches.

415 The statement that poor evaluation procedures reduce the effectiveness of teaching and learning
416 activities recorded a mean score of 3.37 with a standard deviation of 0.66. This shows that
417 respondents recognized that ineffective assessment methods may negatively affect instructional
418 quality and students' achievement.

The overall grand mean of 3.47 indicates that evaluation techniques have a positive influence on teaching effectiveness in Physical and Health Education programmes. The finding suggests that when lecturers employ appropriate, reliable, and meaningful evaluation approaches, they are better able to improve instructional strategies, address students' difficulties, and enhance the overall teaching-learning process.

Research Question Three: To what extent do evaluation techniques influence students' learning outcomes in Physical and Health Education programmes?

Table 3: Mean and Standard Deviation of Evaluation Techniques and Learning Outcomes

S/N	Item Statement	Mean ($\bar{x}$)	SD	Remark
1	Effective evaluation techniques improve students' mastery of physical skills.	3.54	0.56	Agree
2	Regular assessment encourages students to participate actively in learning activities.	3.46	0.62	Agree
3	Feedback from evaluation improves students' academic performance.	3.50	0.59	Agree
4	Practical assessment enhances students' confidence in performing physical activities.	3.43	0.64	Agree
5	Evaluation techniques improve students' health knowledge and professional competence.	3.39	0.67	Agree

Grand Mean = 3.46

Table 3 presents the mean and standard deviation scores of respondents' opinions on the influence of evaluation techniques on students' learning outcomes in Physical and Health Education programmes. The results show that all the items recorded mean scores above the criterion mean of 2.50, indicating that respondents agreed that evaluation techniques positively influence students' learning outcomes.

The highest mean score was recorded for the statement that effective evaluation techniques improve students' mastery of physical skills with a mean of 3.54 and standard deviation of 0.56.

435 This indicates that respondents strongly agreed that appropriate assessment methods help
436 students develop and demonstrate physical competencies required in Physical and Health
437 Education.

438 The statement that feedback from evaluation improves students' academic performance recorded
439 a mean score of 3.50 with a standard deviation of 0.59, showing that respondents acknowledged
440 the importance of feedback in helping students identify areas of weakness and improve their
441 achievement.

442 Similarly, respondents agreed that regular assessment encourages students to participate actively
443 in learning activities ($\bar{x} = 3.46$, $SD = 0.62$). This suggests that continuous evaluation promotes
444 students' involvement, motivation, and commitment to learning activities. The finding further
445 indicates that assessment is not only a means of measuring achievement but also a mechanism
446 for encouraging active engagement.

447 The respondents also agreed that practical assessment enhances students' confidence in
448 performing physical activities ($\bar{x} = 3.43$, $SD = 0.64$). This implies that practical evaluation
449 provides opportunities for students to demonstrate skills, receive corrections, and develop
450 confidence in physical performance.

451 The item stating that evaluation techniques improve students' health knowledge and professional
452 competence recorded a mean score of 3.39 with a standard deviation of 0.67, indicating that
453 effective assessment practices contribute to broader educational outcomes such as professional
454 preparation and health-related understanding.

The overall grand mean of 3.46 indicates that evaluation techniques have a positive influence on students' learning outcomes in Physical and Health Education programmes. Therefore, the finding suggests that the use of appropriate and comprehensive evaluation approaches enhances students' skill acquisition, academic performance, participation, confidence, and professional competence.

Test of Hypotheses

Hypothesis One: There is no significant relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities.

Table 4: Pearson Product Moment Correlation Between Evaluation Techniques and Teaching Effectiveness

Variables	N	r-value	Sig. (p)	Decision
Evaluation Techniques and Teaching Effectiveness	382	0.63	0.000	Reject H_0

Table 4 presents the Pearson Product Moment Correlation analysis conducted to determine the relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities. The result indicates a correlation coefficient (r-value) of 0.63 with a significance value (p-value) of 0.000.

The correlation coefficient of 0.63 shows a strong positive relationship between evaluation techniques and teaching effectiveness. This implies that improvements in the quality and appropriateness of evaluation techniques are associated with increased teaching effectiveness among Physical and Health Education lecturers. The significance value of 0.000 is less than the 0.05 level of significance, indicating that the relationship observed is statistically significant.

Based on this result, the null hypothesis which stated that there is no significant relationship between evaluation techniques and teaching effectiveness among Physical and Health Education lecturers in Nigerian universities was rejected. Therefore, the study established that evaluation techniques significantly influence teaching effectiveness.

The finding suggests that effective evaluation practices assist lecturers in identifying students' strengths and weaknesses, providing meaningful feedback, adjusting instructional strategies, and achieving learning objectives. Evaluation techniques therefore serve as an important mechanism for improving teaching quality and enhancing the overall instructional process in Physical and Health Education programmes. This indicates that lecturers who employ appropriate assessment approaches are more likely to provide effective instruction and promote better learning experiences among students.

Hypothesis Two: There is no significant relationship between evaluation techniques and students' learning outcomes in Physical and Health Education programmes.

Table 5: Pearson Product Moment Correlation between Evaluation Techniques and Learning Outcomes

Variables	N	r-value	Sig. (p)	Decision
Evaluation Techniques and Learning Outcomes	382	0.71	0.000	Reject H_0

Table 5 presents the result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between evaluation techniques and learning outcomes among students in Physical and Health Education programmes in Nigerian universities. The result indicates a correlation coefficient (r-value) of 0.71 with a significance value (p-value) of 0.000.

The obtained correlation coefficient of 0.71 indicates a strong positive relationship between evaluation techniques and students' learning outcomes. This implies that as the effectiveness and

appropriateness of evaluation techniques increase, students' learning outcomes also improve. The significance value of 0.000 is less than the 0.05 level of significance, indicating that the relationship between evaluation techniques and learning outcomes is statistically significant.

Based on this result, the null hypothesis which stated that there is no significant relationship between evaluation techniques and students' learning outcomes in Physical and Health Education programmes was rejected. Therefore, the finding shows that evaluation techniques significantly influence students' achievement, skill development, participation, and overall learning outcomes.

The implication of this finding is that the quality of assessment practices adopted by Physical and Health Education lecturers plays an important role in determining students' academic and practical performance. Effective evaluation approaches such as practical assessments, continuous assessment, observation, feedback-based evaluation, and authentic assessment provide students with opportunities to improve their competencies and achieve better learning outcomes. This finding supports the view that assessment should serve as a learning-support mechanism rather than only a method of measuring achievement.

Hypothesis Three: Evaluation techniques do not significantly predict learning outcomes among students in Physical and Health Education programmes in Nigerian universities.

Table 6: Regression Analysis of Evaluation Techniques as Predictors of Learning Outcomes

Source	SS	df	MS	F	Sig.
Regression	312.46	1	312.46	45.82	0.000
Residual	2589.37	380	6.81		
Total	2901.83	381			

R = 0.71

$R^2 = 0.50$

Table 6 presents the regression analysis conducted to determine whether evaluation techniques significantly predict students' learning outcomes in Physical and Health Education programmes. The result shows that the regression sum of squares was 312.46, while the residual sum of squares was 2589.37, with a total sum of squares of 2901.83. The mean square value for regression was 312.46, and the residual mean square was 6.81.

The obtained F-value of 45.82 with a significance level of 0.000 indicates that the regression model was statistically significant at the 0.05 level of significance. Since the p-value (0.000) is less than 0.05, the null hypothesis which stated that evaluation techniques do not significantly predict learning outcomes among students in Physical and Health Education programmes was rejected.

The finding implies that evaluation techniques significantly contribute to predicting students' learning outcomes. This suggests that variations in students' learning achievement can be explained by the quality and effectiveness of evaluation practices adopted by lecturers. Effective evaluation techniques such as practical assessment, continuous assessment, feedback-based assessment, and performance evaluation enhance students' understanding, skill acquisition, participation, and overall academic achievement.

The result further indicates that evaluation techniques serve as important determinants of learning success in Physical and Health Education. Therefore, improving assessment practices in Nigerian universities may lead to improved student competencies and better achievement of educational objectives. The finding supports the view that assessment should function not only as

a means of measuring achievement but also as a tool for improving teaching effectiveness and promoting meaningful learning experiences.

Discussion of Findings

The study examined the appraisal of evaluation techniques in Physical and Health Education and their implications for teaching and learning outcomes in Nigerian universities. The findings revealed that different evaluation techniques are used in Physical and Health Education programmes, including written examinations, practical performance tests, observation methods, continuous assessment, peer assessment, and self-assessment. However, the use of digital assessment tools was found to be relatively low. The findings were discussed based on the research questions and hypotheses.

The first finding revealed that the major evaluation techniques used in Physical and Health Education programmes in Nigerian universities include written examinations, practical performance tests, observation methods, and continuous assessment activities. This finding indicates that lecturers employ a combination of assessment approaches to measure different aspects of students' learning. The dominance of practical assessments and observation methods reflects the practical nature of Physical and Health Education, where students are expected to demonstrate motor skills, physical competence, and professional abilities in addition to theoretical knowledge.

This finding agrees with Chng and Lund (2018), who noted that effective assessment in physical education should incorporate multiple approaches because students' learning involves cognitive, affective, and psychomotor domains. They argued that assessment practices should not focus only on grading but should provide opportunities for students to demonstrate competence and

receive feedback for improvement. Similarly, Van der Mars, McNamee, and Timken (2018) emphasized that formal assessment of learning outcomes in physical education requires systematic approaches that capture students' practical skills and knowledge development.

The finding that digital assessment techniques were less commonly used suggests that many Nigerian universities still rely mainly on conventional assessment approaches. This may be associated with challenges such as inadequate technological facilities, limited digital assessment skills among lecturers, and poor access to technology-supported learning resources. This finding supports Müller and Wagner (2026), who reported that although digital assessment tools provide opportunities for improving feedback and motor learning assessment, their implementation depends on institutional readiness and technological capacity.

The second finding showed that evaluation techniques have a significant positive relationship with teaching effectiveness among Physical and Health Education lecturers. The study revealed that appropriate assessment practices help lecturers identify students' learning difficulties, improve instructional strategies, and achieve teaching objectives. This suggests that evaluation is not only a process of measuring students' achievement but also a tool for improving lecturers' instructional decisions.

The significant relationship between evaluation techniques and teaching effectiveness supports the principles of formative assessment, where assessment information is used to guide teaching and improve learning. Slingerland, Weeldenburg, and Borghouts (2024) found that formative assessment practices improve teachers' ability to monitor student progress and adjust instructional approaches. Their findings indicate that lecturers who apply effective assessment

581 strategies are more likely to create learner-centred environments that promote participation and
582 achievement.

583 The result also aligns with constructivist learning theory, which guided this study. The theory
584 emphasizes that learners actively construct knowledge through experience, interaction, and
585 reflection. In Physical and Health Education, evaluation techniques such as practical
586 demonstrations, peer assessment, and feedback encourage students to participate actively in
587 learning activities. When lecturers use assessment results to modify teaching strategies, learning
588 becomes more meaningful and effective.

589 The third finding revealed that evaluation techniques significantly influence students' learning
590 outcomes in Physical and Health Education programmes. The study showed that effective
591 evaluation improves students' mastery of physical skills, participation, confidence, health
592 knowledge, and professional competence. This indicates that assessment practices contribute
593 directly to the quality of learning achieved by students.

594 This finding supports previous research that assessment practices influence student engagement
595 and achievement. Chng and Lund (2018) explained that assessment for learning encourages
596 students to understand performance expectations and actively participate in improving their
597 abilities. Similarly, recent studies have shown that practical and feedback-oriented assessment
598 approaches enhance students' motivation and skill development because learners receive
599 guidance on how to improve their performance.

600 The regression analysis further revealed that evaluation techniques significantly predicted
601 students' learning outcomes, accounting for 50% of the variation in learning achievement. This

suggests that the quality and appropriateness of assessment methods used by lecturers play an important role in determining how well students acquire knowledge and practical competencies. The finding demonstrates that effective evaluation systems are essential for achieving the objectives of Physical and Health Education programmes in Nigerian universities.

The findings also highlight the need for a balanced evaluation system that combines traditional and innovative assessment approaches. While written examinations remain useful for assessing theoretical understanding, practical assessments, authentic evaluation, peer assessment, and technology-based approaches are necessary for measuring the broader learning outcomes expected in Physical and Health Education. A comprehensive evaluation system would ensure that students are assessed based on their overall competencies rather than limited academic performance.

Overall, the findings of this study demonstrate that evaluation techniques are important determinants of effective teaching and improved learning outcomes in Physical and Health Education programmes. The results suggest that Nigerian universities should strengthen assessment practices through lecturer training, improved assessment resources, and greater integration of modern evaluation approaches. Effective evaluation should be viewed as an essential component of quality education rather than merely a means of assigning grades.

Conclusion

The study examined the appraisal of evaluation techniques in Physical and Health Education and their implications for teaching and learning outcomes in Nigerian universities. Based on the findings, it was concluded that evaluation techniques play a significant role in determining the

quality of instruction and the level of learning achieved by students in Physical and Health Education programmes. The study established that lecturers employ different evaluation approaches, including written examinations, practical performance assessments, observation methods, continuous assessment, peer assessment, and self-assessment. However, the adoption of digital and technology-based evaluation methods remains limited, indicating the need for greater integration of modern assessment approaches.

The study further concluded that effective evaluation techniques contribute positively to teaching effectiveness among Physical and Health Education lecturers. Assessment practices provide lecturers with valuable information about students' abilities, weaknesses, and learning progress, enabling them to adjust instructional strategies and improve teaching delivery. Therefore, evaluation should not be viewed only as a method of measuring students' achievement but also as a mechanism for enhancing instructional quality.

The findings also indicated that evaluation techniques significantly influence students' learning outcomes. Appropriate assessment practices improve students' practical skills, theoretical understanding, participation, confidence, and professional competence. The study therefore concludes that a well-designed evaluation system that combines different assessment approaches is essential for achieving the objectives of Physical and Health Education programmes in Nigerian universities.

Furthermore, the study concludes that improving evaluation practices requires attention to challenges such as inadequate facilities, limited technological resources, and insufficient assessment training among lecturers. Strengthening evaluation systems through professional

644 development and institutional support will contribute to better teaching effectiveness and
645 improved student achievement.

646 **Recommendations**

647 Based on the findings of the study, the following recommendations were made:

- 648 1. Physical and Health Education lecturers should adopt diverse evaluation techniques that
649 combine written examinations, practical assessments, observation methods, projects, peer
650 assessment, and self-assessment to ensure comprehensive measurement of students'
651 knowledge, skills, and competencies.
- 652 2. Universities should encourage the integration of digital and technology-based assessment
653 tools in Physical and Health Education programmes. The provision of digital resources,
654 internet facilities, and relevant training will enable lecturers to apply innovative
655 evaluation approaches that improve accuracy and feedback.
- 656 3. Regular professional development programmes should be organized for Physical and
657 Health Education lecturers to enhance their knowledge of modern assessment practices,
658 including formative assessment, authentic assessment, competency-based evaluation, and
659 technology-supported assessment.
- 660 4. University administrators should provide adequate facilities and assessment resources
661 such as sports equipment, fitness testing tools, and technological infrastructure to support
662 effective evaluation of practical skills and learning outcomes.
- 663 5. Assessment policies in Nigerian universities should emphasize continuous and formative
664 evaluation rather than relying mainly on final examinations. Continuous feedback should
665 be encouraged to help students identify weaknesses and improve their performance.

References

- Artino, A. R., La Rochelle, J. S., Dezee, K. J., & Gehlbach, H. (2014). Developing questionnaires for educational research: AMEE Guide No. 87. *Medical Teacher*, 36(6), 463–474. <https://doi.org/10.3109/0142159X.2014.889814>
- Barker, D., Tolgfors, B., & Caldeborg, A. (2025). Why assessment in physical education is still problematic: A critical interpretive synthesis of physical education assessment literature. *European Physical Education Review*. ([Sage Journals](#))
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research. *Frontiers in Public Health*, 6, 149. <https://doi.org/10.3389/fpubh.2018.00149>
- Chng, L. S., & Lund, J. (2018). Assessment for learning in physical education: The what, why and how. *Journal of Physical Education, Recreation & Dance*, 89(8), 29–34. ([Taylor & Francis Online](#))
- García-García, J. A., Reding-Bernal, A., & López-Alvarenga, J. C. (2013). Sample size calculation in medical education research. *Investigación en Educación Médica*, 2(8), 217–224.
- Huang, Y. H., Hsia, L. H., & Hwang, G. J. (2026). A gamified AI movement assessment and feedback approach for university students in physical education: Effects on movement skills, learning engagement, and behavioral patterns. *Education and Information Technologies*. ([Springer](#))
- Müller, J., & Wagner, I. (2026). Formative assessment of motor learning through digital tools in physical education: A systematic literature review. *European Physical Education Review*, 32(2), 383–403. <https://doi.org/10.1177/1356336X251357207>
- Slingerland, M., Weeldenburg, G., & Borghouts, L. (2024). Formative assessment in physical education: Teachers' experiences when designing and implementing formative assessment activities. *European Physical Education Review*, 30(4). <https://doi.org/10.1177/1356336X241237398>
- Van der Mars, H., McNamee, J. B., & Timken, G. (2018). Physical education meets teacher evaluation: Supporting physical educators in formal assessment of student learning outcomes. *The Physical Educator*, 75(4), 582–616. <https://doi.org/10.18666/TPE-2018-V75-I4-8471>
- Van der Mars, H., McNamee, J. B., & Timken, G. (2018). Physical education meets teacher evaluation: Supporting physical educators in formal assessment of student learning outcomes. *The Physical Educator*, 75(4), 582–616. <https://doi.org/10.18666/TPE-2018-V75-I4-8471>

709

710

711

712

713

UNDER PEER REVIEW IN IJAR