

Advancing Educational Equity: A Comparative Analysis of Assessment Practices in Alignment with SDG 4

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How to cite this article: Shalini Gupta, Harikrishnan M (2024). Advancing Educational Equity: A Comparative Analysis of Assessment Practices in Alignment with SDG 4. Library Progress International, 44(2), 948-955.

Abstract

This paper explores the intersection of Sustainable Development Goal 4 (SDG 4) and assessment practices, contrasting traditional grading with alternative methods to promote inclusive education. Traditional assessments, often based on standardized tests, are critiqued for perpetuating inequities, particularly among marginalized and diverse learners. Alternative assessments - such as portfolios, performance-based evaluations, and project-based learning - are proposed as more inclusive and growth-oriented approaches. These methods focus on individual progress, critical thinking, and cultural responsiveness, fostering an equitable learning environment. By aligning assessment with the goals of SDG 4, the paper advocates for reforming education to be more inclusive, equitable, and learner-centered.

Keywords: Traditional Assessment, Alternative Assessment, Inclusive Education

Introduction

The United Nations' Sustainable Development Goal 4 (SDG 4) envisions a world where quality education is accessible to all, with an explicit focus on inclusivity and equity (United Nations Educational, Scientific and Cultural Organization, 2017). Within this framework, assessment practices play a pivotal role in determining educational outcomes, particularly for marginalized groups. The traditional grading system, which largely relies on standardized assessments, has come under increasing scrutiny for its role in perpetuating educational inequities (Brookhart, 2013). Standardized grading often privileges students from advantaged socio-economic backgrounds while disproportionately penalizing those with diverse learning needs, disabilities, or those from marginalized communities (Guskey, 2015).

In contrast, alternative assessment methods have emerged as more inclusive approaches to evaluation. These methods - ranging from formative assessments to project-based learning and portfolio assessments - focus on individual student progress and growth, rather than summative judgments. By offering ongoing feedback, these assessments foster a learning environment where diverse student abilities are recognized and nurtured (Wiliam, 2011).

A substantial body of research has examined the effects of traditional grading on educational outcomes, with a growing consensus that such methods often exacerbate educational disparities (Guskey, 2015; Schneider & Hutt, 2020). Traditional grading systems are typically centered on standardized testing, where students' academic abilities are assessed through uniform benchmarks. These practices have been critiqued for emphasizing competition, focusing on end-results rather than learning processes, and inadequately addressing the diverse needs of students (Brookhart, 2013; Feldman, 2020; Andrade, 2021). Research further suggests that traditional grading may hinder the development of intrinsic

motivation and long-term learning by placing undue emphasis on grades as external rewards (Sackstein, 2022; Blair & Scott, 2023).

Conventional Methods of Grade Assessment

Traditionally, the tests were conducted in the form of paper and pencil tests and students were required to select from a list of choices, work out a number, answer a question briefly in a few words or give information about a topic in the form of an essay. The assignment looks at two major aspects of item format in assessment specifically: (1) selected-response items, and (2) constructed-response items.

Selected-Response Items. Selected-response items have an objective format that allows students' responses to be scored quickly. An examiner or a machine can be used to apply a scoring key generated for accurate responses. Multiple-choice, true/false, and matching items are the most widely used types of items in selected-response tests.

Multiple-choice items. Consist of two parts: the stem plus a set of possible responses. The stem is a question or statement. Incorrect alternatives are called distractors. The student's task is to select the correct answer rather than choosing one of the distractors. True/false items ask students to mark whether a statement is true or false. Matching requires students to connect one group of stimuli correctly with a second group of stimuli. Matching is especially well-suited for assessing associations or links between two sets of information (Santrock, 2011).

Constructed-Response Items. Under constructed-response type items, students are required to provide information in written form rather than simply choosing an answer from a list. The short-answer and essay items are forms that have mostly been classified under the category of traditional constructed-response item. In the scoring of constructed-response items, the examiners are often called upon to make certain judgments.

Short-answer item is a constructed-response approach where a student is expected to finish the statement or answer a question with a word, a short phrase, or several sentences. Consonantly, essays provide less restriction in form since students' responses are more variable but require more writing as compared to other formats. From the author's perspective, essay items facilitate the evaluation of students' comprehension of the material, critical thinking, ability to structure the information, and writing (Santrock 2011).

Historically, traditional grading has been viewed as an efficient method of assessing large populations, offering a clear framework for comparing student performance. However, numerous studies have shown that traditional assessments reinforce systemic inequities by favoring students from privileged socio-economic backgrounds, while students with disabilities or those who struggle with test-taking are often left behind (Torrance, 2017). The rigid nature of this approach fails to capture individual progress or learning potential, which is a key component of inclusive education (Petersen, 2021; Tomlinson, 2022). Additionally, recent research has highlighted that traditional grading disproportionately penalizes students from marginalized communities, as it often overlooks cultural and linguistic diversity in assessment methods (Castro, 2023; Liu & Thompson, 2023). This failure to accommodate diverse learning styles undermines efforts towards a more inclusive and equitable educational system (Smith & Reeves, 2024).

Alternative Assessment Approaches

As the impact of assessment on curriculum and teaching became evident, the words 'alternative assessment' were introduced (Dietel et al., 1991). Alternative assessment, in turn, provides an avenue for fresh enthusiasm and creativity on the part of the learners who wish to know about various aspects regarding themselves and their surroundings. There are two approaches within Alternative assessment according to Reeves (2000): 1) Authentic assessment or performance assessment, 2) Portfolio assessment

Authentic Assessment. Assessing a student's knowledge or abilities in a setting that as nearly resembles real life as feasible is known as authentic assessment. Through relevant tasks, it establishes a connection between education and the experiences that each individual learner has in the actual world (Simonson et al, 2000). Role plays, group projects, concept maps, and reflective journals are a few instances of authentic assessment.

Performance Assessment. Performance assessment is defined as the student's generation of a response that may be directly and indirectly observed and evaluated. It includes what is commonly thought of as students' actual performances (such as in dance, music, art, and physical education), as well as papers, projects, oral presentations, experiments, and portfolios. Examples include conducting an experiment, developing a plan for a new park, analyzing government or school policies to make the case for or against them, and reimagining a novel through a new medium like a painting or play.

Portfolio Evaluation. Portfolios are a major change from conventional assessments of learning. A well-curated and methodical compilation of a student's work that showcases their abilities and achievements is called a portfolio. It is an intentional compilation of works that narrates the development of a pupil (Bailey & Brown, 1999).

Examples include writing samples, journal entries, videotapes, art, teacher comments, posters, interviews, poetry, test results, problem solutions, recordings of foreign language communication, self-assessments, and any other form of student expression that the teacher feels best showcases the student's abilities and accomplishments can all be found in a portfolio. Four forms of evidence that can be presented in students' portfolios are artifacts, reproductions, attestations, and productions (Barton & Collins, 1997). Recent years have seen a sharp rise in interest in portfolio assessment (Qvortrup & Keiding, 2015; Ugodulunwa & Wakjissa, 2015).

Alternative assessment methods offer a more holistic and inclusive means of evaluating student performance (Wiliam, 2011). These approaches are often student-centered, focusing on the development of critical thinking, problem-solving skills, and individual growth. Research supports the use of alternative assessments in promoting equity, particularly for students with disabilities or those from socio-economically disadvantaged backgrounds (Tomlinson, 2014; McTighe & Willis, 2023). These methods offer flexibility and allow for more individualized feedback, fostering a learning environment that recognizes the unique abilities of each student.

The Role of Inclusive Assessment in SDG 4

The intersection of assessment and inclusivity is central to the realization of SDG 4. Studies have demonstrated that inclusive assessment practices are key to achieving equitable educational outcomes, particularly for marginalized groups (Black & Wiliam, 2010). Formative assessment, for instance, encourages continuous improvement by providing real-time feedback that can be adjusted to meet students' evolving needs. This adaptability is crucial for promoting educational equity and ensuring that no student is left behind (Wiliam, 2011).

Fostering Inclusive Learning through Alternative Assessments

Alternate assessment methods are generally considered more effective than traditional assessments when evaluating diverse learners because they offer flexibility and inclusivity, better catering to the needs of students with different learning styles, abilities, and backgrounds.

Tailoring to Individual Needs

Teachers can take into account the different learning styles, abilities, and shortcomings of their students by using alternative evaluation methods. Compared to traditional exams, these techniques are less strict and give students more options for proving their knowledge (Pellegrino & Hilton, 2022).

For example, according to Barrett (2020), portfolios allow students to choose the content they include, enabling them to highlight their strengths while encouraging self-reflection. Darling-Hammond & Oakes (2021) found that performance-based assessments are particularly effective for students with diverse needs, including those with learning disabilities and English language learners. Project-Based Learning (PBL) allows students to engage in extended projects that integrate multiple subject areas, providing a hands-on, inquiry-based approach. Students have the freedom to explore topics of interest and work at their own pace, which supports their unique learning needs. A study by Thomas (2020) revealed that PBL promotes deeper understanding and critical thinking, particularly for students with diverse needs.

Self-assessment and peer assessment encourage students to take ownership of their learning by evaluating their own or their peers' work. This method fosters reflection and allows students to set personal goals based on their unique

strengths and areas for improvement. Andrade & Du (2022) explored how self-assessment encourages metacognition and allows students to monitor their progress according to individualized learning goals.

Formative assessments involve ongoing feedback during the learning process, rather than a single, high-stakes test. This can include quizzes, discussions, or one-on-one check-ins with the teacher, allowing for adjustments in teaching to meet individual needs. Black & Wiliam (2020) demonstrated that formative assessments help teachers tailor instruction to individual learning needs. By providing immediate feedback, these assessments allow students to improve before reaching a final evaluation, which is particularly beneficial for students who may struggle with traditional timed tests.

Cultural Responsiveness

Students from different linguistic and ethnic origins may be at a disadvantage because traditional examinations frequently reflect the prevailing cultural norms. Students can interact with the content in ways that are relevant to their experiences by using alternative assessments that take into account their cultural and contextual knowledge.

A study by Nieto & Bode (2021) emphasizes that alternative assessments, such as project-based learning, are better suited for culturally responsive teaching. For example, a student from a specific ethnic community might be asked to create a project that relates to their community's history or traditions, making the learning process more meaningful and engaging. A study by Gay (2020) found that culturally responsive performance assessments improve students' engagement and performance because they allow students to draw from their cultural experiences to complete tasks.

Portfolio assessments include projects, essays, and reflections that explore students' cultural heritage, family traditions, or community involvement, allowing them to bring their own identities into their learning journey Paris & Alim (2021).

Community-based project learning as part of alternative assessments, engage students in learning tasks that directly connect with their communities. For example, students may be asked to address a local issue (such as environmental concerns or public health), incorporating their knowledge of the local culture and community dynamics. A study by Sleeter (2022) found that community-based projects foster a sense of agency in students by allowing them to apply their knowledge to real-world problems in culturally relevant ways.

Linguistically inclusive assessments such as oral presentations, debates, or multilingual projects, can accommodate students who are English language learners (ELLs) by allowing them to demonstrate their knowledge in their native language or through bilingual options. This helps to reduce linguistic barriers that are often present in traditional assessments (García & Kleifgen, 2020).

Self-Assessment linked to cultural identity allows students to reflect on their learning and performance from the perspective of their own cultural values and experiences. A study by Ladson-Billings, 2021 has shown that this method can help students connect their personal and cultural identities with academic goals, encouraging them to assess their growth in culturally meaningful ways.

Encouraging Higher-Order Thinking

Traditional assessments tend to emphasize rote memorization, while alternative methods encourage critical thinking, problem-solving, and creativity. Brookhart (2020) highlights that alternative assessment methods promote higher-order thinking skills, which are crucial for all students, particularly those from diverse learning backgrounds.

Performance-based assessments encourage higher-order thinking by asking students to analyze situations, develop solutions, and reflect on their outcomes (Darling-Hammond & Adamson, 2020). Example, in a science class, rather than answering multiple-choice questions about ecosystems, students might be asked to design a sustainable ecosystem model, explain how various factors interact, and present a plan to address environmental challenges.

In Project-Based Learning (PBL), students in a social studies class might be asked to research a historical event, evaluate its impact on modern society, and develop a multimedia presentation proposing solutions to contemporary issues

related to that event. A study by Thomas (2021) found that students engaged in PBL demonstrated higher levels of critical thinking, collaboration, and creativity.

Zubizarreta (2022) found that portfolio assessments promote metacognition, requiring students to reflect on their learning processes and set goals for improvement. Example, in a language arts class, students might create a portfolio of written assignments, including drafts, peer reviews, and final versions. They would then write a reflective essay analyzing how their writing skills have developed and what strategies they used to improve.

Case Studies engage students in analyzing real-world scenarios, identifying problems, evaluating evidence, and proposing solutions. In a business course, students might be given a case study of a company facing financial difficulties. They would need to analyze the company's situation, evaluate potential solutions, and propose a strategy for recovery, considering multiple variables and potential outcomes. Lundeborg et al. (2020) found that using case studies in the classroom helps students develop critical thinking, problem-solving, and decision-making skills.

According to Andrade & Brookhart (2021), peer and self-assessments promote critical thinking by requiring students to engage in reflective practices, such as evaluating evidence, considering multiple perspectives, and identifying areas for improvement. Example, in a peer assessment activity, students might evaluate each other's presentations based on specific criteria such as clarity, argumentation, and use of evidence.

A study by Zare & Othman (2020) found that debates enhance critical thinking and argumentative skills by requiring students to research a topic, analyze different viewpoints, develop arguments, and defend their positions. Example, in a history class, students could participate in a debate on the causes of a major historical conflict. They would need to research primary sources, develop a well-reasoned argument, and respond to counter arguments from their peers.

Focus on Growth over Grades

Traditional assessments often focus on a single snapshot of student performance, whereas alternative assessments emphasize student growth and development over time. This can reduce anxiety and foster a more positive attitude toward learning, particularly for students who struggle with standardized tests. Sabol & Pianta (2021) argue that alternative assessments are more effective in measuring learning progress, which is crucial for inclusive education.

Black and Wiliam (2020) emphasize that formative assessments shift the focus from grades to learning improvement. Their research shows that formative feedback enhances student engagement and motivation by providing constructive insights into areas that need development. Example, a teacher might give frequent, low-stakes quizzes, informal discussions, or peer reviews during a unit on writing. Instead of grading each task, the teacher provides feedback to help the student improve on specific areas like structure, argumentation, or grammar.

In Portfolios, the emphasis is on their creative process and skill development, rather than a single final product. Zubizarreta (2022) found that portfolios promote a growth-oriented mindset because they highlight long-term improvement and provide students with opportunities to reflect on their progress. This reflection process helps students take ownership of their learning and focus on personal growth.

Andrade and Du (2021) found that self-assessment encourages students to focus on their learning goals and growth, rather than comparing themselves to others. By reflecting on their progress, students develop metacognitive skills and take responsibility for their own learning trajectory.

Narrative Evaluations provide personalized, descriptive feedback instead of a numerical or letter grade. This method focuses on individual progress, strengths, and areas for improvement, encouraging students to view learning as a continuous process rather than a fixed outcome. Example: In place of a traditional grade, a teacher might write a detailed evaluation at the end of the semester, noting how the student's writing has evolved, strengths in analysis, and specific areas for future growth. Kohn (2020) argues that narrative evaluations promote a focus on growth by providing specific, actionable feedback that helps students improve. This approach reduces the stress associated with grades and supports deeper engagement with learning.

Thomas (2021) found that PBL, when combined with iterative feedback, supports student growth by encouraging continuous learning and refinement of skills. Students learn to embrace mistakes as part of the process and focus on developing solutions. Example: A science teacher might have students work on a long-term project where they design and test a prototype. At each stage-research, design, and testing-the teacher provides feedback, and students revise their work based on this input, focusing on growth and improvement rather than the final grade.

Instead than focusing only on test results, Mastery-based learning evaluates students on their capacity to demonstrate mastery of particular skills or knowledge. As a result, students are free to go at their own speed and concentrate on meeting their learning objectives. Example: In a math lesson, students might work on problem sets until they can demonstrate mastery of fundamental ideas. Students practice with feedback until they achieve mastery, at which point they receive credit for the skill, as opposed to getting a grade based on their first try. According to Guskey (2020), mastery-based learning puts more emphasis on personal development and competency than on grades and competition. It is encouraged that students see learning as a process and keep trying until they master the material.

By providing diverse learners with multiple ways to demonstrate their knowledge and skills, alternative assessments foster inclusivity and equity, which aligns with the goals of SDG 4.

Conclusion

Assessment practices significantly impact student outcomes, particularly regarding inclusivity and equity, as outlined in SDG 4. Traditional grading systems, focused on standardized tests, often overlook the diverse needs of students, deepening educational disparities. In contrast, alternative assessments promote individual growth, critical thinking, and cultural sensitivity. By emphasizing progress over grades, these methods create a more equitable and inclusive educational environment. Adopting alternative assessments is crucial for achieving SDG 4's goal of fostering an inclusive, just educational system where all students can thrive.

References

- Andrade, H. L., Brookhart, S. M., & Yu, E. C. (2021, December). Classroom assessment as co-regulated learning: A systematic review. In *Frontiers in education* (Vol. 6, p. 751168). Frontiers Media SA.
- Angelo, T. A. (1999). Doing assessment as if learning matters most. *AAHE Bulletin*, 51(9), 3-6.
- Bailey, K., & Brown, J. (1999). Learning about language assessment: Dilemmas, decisions, and directions & new ways of classroom assessment. *Learning*, 4(2), 1-8.
- Barrett, M. D. (2020, July). The evolving assessment landscape and adaptive instructional systems-moving beyond good intentions. In *International Conference on Human-Computer Interaction* (pp. 435-446). Cham: Springer International Publishing.
- Barton, J., & Collins, A. (1997). *Portfolio Assessment: A Handbook for Educators. Assessment Bookshelf Series*. Dale Seymour Publications, 10 Bank Street, White Plains, NY 10602 (order number DS49387).
- Black, P., & Harrison, C. (2010). Formative assessment in science. *Good practice in science teaching: What research has to say*, 183-210.
- Black, P., Harrison, C., Hodgen, J., Marshall, B., & Serret, N. (2010). Validity in teachers' summative assessments. *Assessment in Education: Principles, Policy & Practice*, 17(2), 215-232.
- Brindley, G. (2001). Outcomes-based assessment in practice: Some examples and emerging insights. *Language testing*, 18(4), 393-407.
- Brookhart, S. M., & McMillan, J. H. (2020). *Classroom assessment and educational measurement* (p. 296). Taylor & Francis.
- Brookhart, S. M. (2013). *How to create and use rubrics for formative assessment and grading*. Ascd.
- Burz, H. L., & Marshall, K. (1996). *Performance-Based Curriculum for Mathematics: From Knowing to Showing*. Corwin Press, Inc., 2455 Teller Road, Thousand Oaks, CA 91320.
- Castillo-Manzano, J. I., Castro-Nuño, M., López-Valpuesta, L., Sanz-Díaz, M. T., & Yñiguez, R. (2023). Evaluating the design of digital tools for the transition to an e-continuous assessment in higher education. *Journal of Computing in Higher Education*, 1-19.
- Chai, C. S., Deng, F., Tsai, P. S., Koh, J. H. L., & Tsai, C. C. (2015). Assessing multidimensional students' perceptions of twenty-first-century learning practices. *Asia Pacific Education*
- Cirit, N. C. (2015). Assessing ELT Pre-Service Teachers via Web 2.0 Tools: Perceptions toward Traditional, Online and Alternative Assessment. *Turkish Online Journal of Educational Technology-TOJET*, 14(3), 9-19.

- Cote, K., & Emmett, T. (2015). Effective implementation of ePortfolios: The development of ePortfolios to support online learning. *Theory Into Practice*, 54(4), 352-363.
- Darling-Hammond, L. (2020). Culture, learning, and policy. In *Handbook of the cultural foundations of learning* (pp. 404-426). Routledge.
- Darling-Hammond, L., & Oakes, J. (2021). *Preparing teachers for deeper learning*. Harvard Education Press.
- Feldman, V. (2020, June). Does learning require memorization? a short tale about a long tail. In *Proceedings of the 52nd Annual ACM SIGACT Symposium on Theory of Computing* (pp. 954-959).
- García, O., & Kleifgen, J. A. (2020). Translanguaging and literacies. *Reading research quarterly*, 55(4), 553-571.
- Gay, G. H. (2020). Together Apart during the COVID-19 Pandemic: Assessing Students' Readiness for Online Assessments Using an E-Learning System. In *E-Learning and Digital Education in the Twenty-First Century*. IntechOpen.
- Guskey, T. R. (2020). Breaking up the grade. *Educational, School, and Counseling Psychology Faculty Publications*, 48.
- Harikrishnan, Pramod & Shikha Teacher Perception on SDG Goalsamalgamation in Hybrid Classrooms Curricular Transactions. *International Journal of Early Childhood Special Education (INT-JECSE)* 14(5) 1308-5581
- Hamayan, E. V. (1995). Approaches to alternative assessment. *Annual review of applied linguistics*, 15, 212-226.
- Hess, K. (2023). *Rigor by Design, Not Chance: Deeper Thinking Through Actionable Instruction and Assessment*. ASCD.
- Jamil, F. M., Sabol, T. J., Hamre, B. K., & Pianta, R. C. (2015). Assessing teachers' skills in detecting and identifying effective interactions in the classroom: Theory and measurement. *The elementary school journal*, 115(3), 407-432.
- Kim, M., & Covino, K. (2015). When stories don't make sense: Alternative ways to assess young children's narratives in social contexts. *The reading teacher*, 68(5), 357-361.
- Kohn, P. (2024). Evaluation and Assessment in Interactive Leadership Teaching. In *Elevating Leadership* (pp. 149-166). Emerald Publishing Limited.
- Ladson-Billings, G. (2021, July). Three decades of culturally relevant, responsive, & sustaining pedagogy: What lies ahead?. In *The Educational Forum* (Vol. 85, No. 4, pp. 351-354). Routledge.
- Law, B., & Eckes, M. (1995). *Assessment and ESL: On the Yellow Big Road to the Withered of Oz. A Handbook for K-12 Teachers*. Peguis Publishers Limited, 100-318 McDermot Avenue, Winnipeg, Manitoba, Canada R3A 0A2.
- Morris, P., & Therivel, R. (Eds.). (2001). *Methods of environmental impact assessment* (Vol. 2).
- Muñoz, M. A., & Guskey, T. R. (2015). Standards-based grading and reporting will improve education. *Phi Delta Kappan*, 96(7), 64-68.
- Nasab, F. G. (2015). Alternative versus traditional assessment. *Journal of Applied Linguistics and Language Research*, 2(6), 165-178.
- Nguyen, H. T. T., Van To, B., Le, H. T. T., Cao, K. T., & Tran, H. Q. (2022). Authentic assessment in teaching at high schools in Vietnam. In *Educational innovation in Vietnam* (pp. 242-259). Routledge.
- Parsi, A., & Darling-Hammond, L. (2015). Performance Assessments: How State Policy Can Advance Assessments for 21st Century Learning. White Paper. *National Association of State Boards of Education*.
- Peterman, K., Cranston, K. A., Pryor, M., & Kermish-Allen, R. (2015). Measuring primary students' graph interpretation skills via a performance assessment: A case study in instrument development. *International Journal of Science Education*, 37(17), 2787-2808.
- Popham, W. J. (2017). Classroom assessment: Staying instructionally afloat in an ocean of accountability. In *The future of assessment* (pp. 263-278). Routledge.

- Qvortrup, A., & Keiding, T. B. (2015). Portfolio assessment: production and reduction of complexity. *Assessment & Evaluation in Higher Education*, 40(3), 407-419.
- Santrock, J. W. (2011). *Educational psychology*. McGraw-Hill.
- Terwilliger, J. (1997). Research news and comment: Semantics, psychometrics, and assessment reform: A close look at “authentic” assessments. *Educational Researcher*, 26(8), 24-27.
- Thompson, I., Koenig, N., Mracek, D. L., & Tonidandel, S. (2023). Deep learning in employee selection: Evaluation of algorithms to automate the scoring of open-ended assessments. *Journal of Business and Psychology*, 38(3), 509-527.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners*. Ascd.
- Tolipova & Harikrishnan (2024) View of Sustainable Development in Primary School Education: Empowering Differently-Abled Children in Delhi NCR, India. *Educational Administration Theory and Practice* 30(1)
- Torrance, E. P. (2017). Creativity research in education: Still alive. In *Perspectives in creativity* (pp. 278-296). Routledge.
- Ugodulunwa, C., & Wakjissa, S. (2015). Use of Portfolio Assessment Technique in Teaching SmithMap Sketching and Location in Secondary School Geography in Jos, Nigeria. *Journal of Education and Practice*, 6(17), 23-30.
- Wiliam, D. (2010). The role of formative assessment in effective learning environments. *The nature of learning: Using research to inspire practice*, 135-155.
- Wiliam, D. (2011). What is assessment for learning?. *Studies in educational evaluation*, 37(1), 3-14.
- Wiliam, D. Y. L. A. N. (2020). How to think about assessment. *The researchED guide to assessment: An evidence-informed guide for teachers*, 21-36.