Peer Reviewed · International

2026; 2-3 | 184-192

Journal of Emerging Perspectives in Arts and Humanities

ISSN: 3121-6439

Volume 2, Issue 3, June, 2026

(An Academians Publishers of Research & Academic Resources)

Research Article

Assessment and Performance Evaluation Techniques for Students with Hearing and Speech Impairment in Special School Onitsha.

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Abstract: This study examined assessment and performance evaluation techniques for students with hearing and speech impairment in Special School Onitsha, with emphasis on challenges and innovation. The assessment problems and advances for Onitsha children with hearing and speech issues were examined. This study studied these students' assessment methods, performance evaluation concerns, creative ideas to improve assessment, and how present evaluation methods affect academic performance and educational outcomes. Green (2026) and Rose and Meyer (2000) recommended CRT-B and UDL for research. A sequential mixed-methods explanatory design was utilised. A stratified random sample of 25 instructors and 60 students from Odoakpu's Onitsha Special Secondary School for the Deaf was used. We collected data using questionnaires, interview guides, and assessment record checklists. Theme analysis, descriptive statistics, and inferential statistics were employed for qualitative and quantitative data. Writing, practical, observational, and visual/project evaluations ruled. Self, peer, and portfolio evaluations were infrequent. Insufficient assistive technology, teacher training, sign language interpreters, communication barriers, and standardised evaluation were serious concerns. Integration of assistive technology, sign language-based evaluations, adaptive assessment training, and visual/project-oriented methodologies improved assessment and academic results. Hearing and speech-impaired children are not properly assessed for communication needs, the study revealed. Performance evaluation is unfair and ineffective owing to obstacles. Data demonstrate environmental and structural constraints limit appraisal, not intellect. The report advised portfolio and sign language exams. Evaluate inclusively. Assessments need sign language interpreters. Teaching involves ongoing UDL training and adaptive evaluation. Schools need innovative, equal textual, practical, observational, and visual evaluation systems.

Keywords: *Assessment, performance, evaluation techniques Students with hearing and speech Impairment, Special School Onitsha.*

1. Introduction

All children, regardless of disabilities, deserve outstanding education. Hearing- and speech-impaired students struggle with communication, classroom involvement, comprehension, and academic performance. Thus, effective assessment and performance evaluation are necessary to determine students' strengths, shortcomings, progress, and educational requirements. Assessment must match students' communication and learning styles in special schools like Special School Onitsha. Recent breakthroughs in assistive technologies, individualised testing, and novel evaluation systems have improved educational performance, but considerable hurdles remain.

Assessment evaluates students' knowledge, skills, behaviours, and development to inform educational decisions. It helps teachers discover strengths, shortcomings, educational requirements, and interventions. Power-deFur (2023) states that special education evaluation establishes eligibility, directs instructional preparation, and promotes individualised treatments. Effective evaluation improves disability education, according to Baniaturrohmah et al. (2023). Sign-language-supported evaluation, observation, portfolios, and practical demonstrations may be needed for hearing- and speech-impaired students because written and spoken exams may not accurately assess their abilities.

Evaluation of students' success, competences, academic advancement, and behaviour complements assessment. It evaluates educational goals and suggests improvements. Communication modality, linguistic accessibility, and the educational environment affect deaf learners' performance, according to Neild and Clark (2020). Thus, examination should involve communication and functional skills as well as intellectual exams. Such evaluation lets teachers track hearing- and speech-impaired students despite

Received 07 May 2026; Accepted: 10 June 2026; Available online 22 June 2026

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communication difficulties.

Language, communication, and education are greatly impacted by hearing loss. Untreated hearing loss reduces classroom involvement, speech development, and academic performance, according to research. Olufemi-Adeniyi and Adeniyi (2023) say hearing disability affects students socially, emotionally, cognitively, and intellectually. Speech impairment, which affects articulation, fluency, voice quality, and language use, can also limit classroom engagement and evaluation. Waqar, Fatima, and Riaz (2023) found that speech and language deficiencies hurt academic achievement but improve with remediation. These challenges make alternative and adaptive evaluation approaches essential for hearing- and speech-impaired students.

Special schools help students with disabilities by providing specialised instruction, competent staff, individualised educational plans, and assistive technology. Special education assessment involves multidisciplinary teamwork and flexible evaluation methods, say researchers. To guarantee fair and meaningful educational evaluation, Special School Onitsha must accommodate learners' communication preferences, including sign language, lip-reading, hearing aids, and other assistive equipment, during assessment and performance review.

Hearing- and speech-impaired students have several problems in assessment, despite its relevance. Assistive technology, special education training, finance, communication, and evaluation tools are lacking. Standardised tests often ignore deaf students' linguistic and cultural diversity, which may misjudge their ability. Ali et al. (2024) note that Nigerian special education evaluation is hindered by poor infrastructure, professional competency, and policy implementation.

New technologies can improve assessment and performance evaluation. Digital assessment tools, AI-supported evaluation systems, assistive technology, speech and sound perception apps, and personalised assessment models improve inclusivity and accuracy. Damri et al. (2023) showed how technology-based assessments might help hearing-impaired students. Such changes could improve Special School Onitsha assessment reliability, equity, and efficacy.

Assessment and performance evaluation methods for hearing- and speech-impaired students in Special School Onitsha, including challenges and innovative solutions, have received less attention than hearing impairment, inclusive education, and assistive technologies. Thus, the efficacy of present assessment methods and the use of innovations are unknown.

This study examines assessment and performance evaluation of hearing- and speech-impaired students in Special School Onitsha, focusing on current assessment methods, obstacles, and novel ways that can improve educational outcomes. The study examines how these learners are assessed, assessment and performance evaluation challenges, current practices, and new solutions to improve assessment processes and learner achievement.

This study affects students, parents, teachers, administrators, government organisations, policymakers, and researchers. Fairer and more inclusive assessment procedures, communication-sensitive evaluation methodologies, assistive technology use, and teacher competence in adaptive assessment may result. The study may also inform policy, funding, and educational programs for hearing and speech-impaired students.

According to Green's (2026) Communication Reciprocity Theory of Behaviour (CRT-B), reciprocal communication between learners and their environment affects learning and behaviour. Effective communication improves understanding, involvement, and academic performance, while communication impediments may hinder learning. The idea emphasises sign language, visual assistance, and assistive technologies in assessment and evaluation. The Technology Acceptance Model (Davis, 1989) shows how perceived usefulness and ease of use affect educational assessment technology uptake.

This study examines assessment and performance evaluation procedures for hearing- and speech-impaired students in Special School Onitsha, advancing special education knowledge. It aims to improve communication-sensitive assessment understanding, identify difficulties, and promote new techniques to improve educational results and inclusive education.

2. Literature Review

This study's conceptual framework is based on the relationships between assessment procedures, performance evaluation, hearing and speech-impaired pupils, special schools, obstacles, and innovation. The framework shows how these variables affect Special School Onitsha's hearing and speech-impaired students' education.

This study emphasises assessment and performance evaluation. Assessment is the systematic collection and interpretation of academic accomplishment, skills, and learning progress data for decision-making (Power-deFur, 2023). Performance evaluation uses formative and summative methods to assess students' progress against educational objectives (Neild & Clark, 2020). These techniques must be modified for hearing and speech-impaired pupils' communication hurdles and unique learning demands.

This study targets hearing- and speech-impaired students. Hearing impairment is partial or entire loss of hearing that impacts communication and learning, while speech impairment is difficulty in articulation, fluency, or voice production that hinders verbal expression. These deficits severely impact how students interact with instructional information and exhibit knowledge during assessment. Thus, their educational evaluation necessitates unique assessment procedures.

These students receive specialised support at special schools. Special schools offer individualised instruction, specialised resources, and qualified staff to disabled students (Baniaturrohmah et al., 2023). In this situation, assessment should be flexible, individualised, and supportive of learners' communication needs.

These characteristics are affected by assessment and performance evaluation challenges. Poor assistive technology, a lack of trained special educators, evaluation

tools, communication hurdles, and funding are these issues (Ali et al., 2024; Neild & Clark, 2020). These limitations reduce assessment accuracy and impartiality, restricting academic performance evaluation.

However, innovation moderates and improves the framework. Assistive technology, digital assessment tools, and individualised evaluation procedures are examples of innovation that improves educational assessment (Damri et al., 2023; UNESCO, 2024). Innovative techniques make assessment and performance evaluation for hearing and speech-impaired pupils more effective, fair, and inclusive.

This conceptual framework applies assessment and performance evaluation methods to special school hearing and speech-impaired kids. Challenges may diminish the accuracy and impartiality of evaluation results, limiting the effectiveness of these procedures. Innovation enables better assessment, fewer difficulties, and better performance evaluation. The interaction of these elements impacts Special School Onitsha's hearing and speech impaired students' academic success.

3. Theoretical Framework

Hearing and speech-impaired students' behaviour, learning, and performance evaluation are explained by the Communicative Reciprocity Theory of Behaviour. Unlike traditional behavioural theories, CRT-B promotes communication as the key influence on conduct and academic success. This method is pertinent to our inquiry since assessment and performance evaluation communicate. The Communicative Reciprocity Theory (CRT-B) by Green (2026) claims that hearing and speech impairment learners' behaviour is caused by disordered communicative interactions, not cognitive or emotional deficiencies. It accused classical conditioning, operant conditioning, and social learning theory of underestimating communication's effect on behaviour (Mehrad et al., 2024).

Relational and interactionist theories underpin CRT-B, which views schools as communicative systems where meaning exchange drives teaching, learning, and evaluation. Incompatibles (e.g., speaking instead of signing) may cause kids to lose interest or perform poorly. Behaviours adjust to communication constraints, not inability, says CRT-B.

Five interconnected CRT-B constructs shape education and conduct: Communicative accessibility lets students learn and evaluate through suitable channels. Inaccessible communication hinders learning and performance, states Green (2026).

Relevance to Study: Many assessment methods use spoken or written language, which may disadvantage hearing and speech-impaired children. Communicative accessibility aids sign language interpretation, visual assessment, and practical demonstrations in this study. Teachers and students acknowledge each other throughout communication. Successful communication requires both parties to recognise and respond to each other's signals.

Studies show that teachers must accurately assess pupils' nonverbal and sign language replies. Missing reciprocity may overestimate learner ability. This study suggests interactive and responsive evaluation strategies that confirm students' communication preferences.

Feedback and student communication should match. Green (2026) states reinforcement only works when learned with comprehension. Study relevance: Learning requires performance evaluation feedback. Visual, signed, and multimodal feedback systems help hearing and speech-impaired children develop academically in this study.

When communication is difficult, children express demands, frustrations, and comprehension through behaviour. Communication is not discipline, according to CRT-B. Relevance: Evaluation inattentiveness or retreat may suggest communication issues, not ability. This construct supports flexible and alternate evaluation systems that allow students demonstrate knowledge in numerous ways, according to the study.

Environmental Responsibility: Schools meet kids' communication needs. Green (2026) thinks institutional responsiveness shapes conduct. Relevance to Study: The testing setting must accommodate hearing and speech-impaired students. This incorporates visual assistance, flexible technology, and comfortable classrooms. Thus, the study encourages assessment innovation and institutional flexibility.

Educational Implications of CRT-B Sequential Behaviour. Educational conduct develops sequentially, per CRT-B. Communication breakdown. No reciprocity. Distorted reinforcement. Signalling change. Institutional reaction This sequence discovers performance and assessment issues. Communication problems, not talent, can cause academic failure. Implications: This research examines assessment issues in Special School Onitsha and suggests communication-based solutions to improve fairness and accuracy.

Assessment/CRT-B Performance Assessment: Assessment of CRT-B alterations in this study: Transitioning from deficit- to communication-based evaluation. Promote visual, practical, and sign-based testing. Promote teacher sign language and communication training. Using assistive technology in tests. Assessment-based student engagement. These apps help hearing- and speech-impaired kids learn quickly.

Since it applies to assessment and performance evaluation, CRT-B was chosen as the theoretical framework. Communication integration, according to theory. Resolving assessment issues. A creative, inclusive education framework. Empirically applying special education

Universal Design for Learning (UDL) Theory by David H. Rose and Anne Meyer (2000) is another theoretical framework for this investigation. Neuroscience research on learning underpins UDL. It claims that inflexible curriculum, instruction, and evaluation cause learning hurdles, not students. The theory suggests 3 instruction and assessment design principles: i. Multiple Representations: Present content in visual, aural, tactile, and digital modes so learners can access it regardless of sensory capabilities. Different ways to act and express: Allow pupils to demonstrate their knowledge using writing, speaking, drawing, technology, and sign language. Provide multiple engagement alternatives to maintain interest, motivation, and self-regulation. Making curriculum and evaluation

accessible to the greatest range of learners from the start reduces the need for retrofitting modifications.

UDL challenges single-format examinations like written English tests for hearing-impaired pupils. It supports various methods like: Visual and project-based evaluations. Sign language or video presentations. Interactive quizzes and digital portfolios. Visual and captioned rubrics. The study seeks methods to accurately measure performance without hearing loss. Overreliance on oral and written English exams, absence of assistive technology, and instructors' inadequate flexible assessment design training are major issues at Special Secondary School Onitsha. UDL calls these system design failures, not student deficiencies. The idea frames these issues as accessibility and instructional design issues.

UDL outlines innovation: Using FM systems, captioning software, and interactive displays in daily instruction and assessment. Training instructors to create multi-modal evaluations from the start. Changing policy from "accommodation after failure" to "accessibility by design." Why This Theory Fits: Communication and information availability, not IQ or learning ability, are the biggest obstacles for hearing-impaired pupils. UDL emphasises assessment environment and procedures over student modification. It gives your study a theoretical foundation and a practical framework for assessing current practices and developing inclusive, creative assessment methods.

4. Review of Empirical Studies

Research on assessment and performance evaluation for hearing and speech-impaired students shows an increasing interest in inclusive education through adaptive approaches, assistive technologies, and learner-centred evaluation systems. New special education assessment research shows both classic and developing issues.

Neild and Clark (2020) observed that deaf students are commonly assessed using traditional instruments that don't adequately reflect their academic abilities. The study found that communication hurdles, language variations, and contextual factors affect assessment outcomes, highlighting the need for flexible and multimodal evaluation methods that meet varied learning demands.

A research by Ali, Nazir, and Haq (2024) examined how special education teachers judge hearing-impaired students. The results showed that teachers use sign language, simplify questions, and offer explanations to improve exam comprehension. Limitations include time, lack of standardised tools, and inadequate teacher training in specialised evaluation approaches, according to the report. This facilitates structured and consistent evaluation in special schools.

Another empirical study by Casoojee, Khoza-Shangase, and Kanji (2024) found that communication access and instructional support greatly affect hearing-impaired learners' performance rating. Students with stronger sign language interpretation and visual instructional support fared much better, according to the study. Communication accessibility is crucial in performance evaluation.

Damri et al. (2023) designed a technology-based assessment application for hearing-impaired students and discovered that digital and assistive technologies increased auditory perception and learning outcomes accuracy and consistency. The study found that assessment method innovation improves objectivity and enables individualised learning assessment.

A thorough review by Stefánsdóttir et al. (2024) found that speech intelligibility and academic assessment of hearing-impaired students vary substantially by approach. Lack of standardised assessment tools and combining numerous evaluation methods to increase reliability and validity of assessment outcomes were highlighted in the study.

Research on assistive technology use suggests that hearing aids, captioning systems, and digital learning platforms benefit hearing-impaired students. These techniques reduce communication obstacles to facilitate training and performance evaluation.

Another empirical study by Tronstad et al. (2022) demonstrated that specialised teaching tactics and adaptive learning aids increase learning results for hearing-impaired students, especially when evaluation is tailored to their needs.

Finally, recent studies on AR, VR, and AI-based educational technologies show that they are improving communication access, assessment accuracy, and learner engagement for hearing and speech-impaired students, despite cost, training, and accessibility issues.

Traditional testing methods often fail hearing and speech-impaired students. Teachers often change evaluation methods, but inconsistencies persist. Communication issues greatly impact performance. Digitisation and assistive technology improve assessment. Standardised and widely used evaluation tools for special schools are lacking, especially in developing countries like Nigeria. Thus, this study must investigate Special School Onitsha's assessment and performance evaluation methods, identify obstacles, and provide new solutions to improve educational outcomes.

5. Methodology

Explanatory sequential mixed-methods research was used in this study. This design is suitable because it provides both broad data on current practices and deep awareness of special school difficulties and innovations.

Special Secondary School for the Deaf, Odoakpu, Onitsha, Anambra State, Nigeria, hosted the study. The school was chosen because it serves hearing-impaired pupils and shows how evaluation techniques affect learning. All Odoakpu Onitsha Special Secondary School for the Deaf teachers are included. Every SS1-SS3 student with hearing loss

All teachers who teach and assess deaf students will be selected using purposive sampling because they are the important informants on assessment techniques. SS1-SS3 students will be selected using stratified random sampling to represent diverse academic levels and communication styles. Krejcie and Morgan's sample size table recommended 25 teachers and 60 pupils for statistical power and qualitative follow-up. A 4-point Likert scale and open-ended responses were employed. To identify evaluation data, grading criteria, and feedback systems in

existing records. Semi-structured guide for instructors and students to discuss assessment issues and new approaches such visual aids, ICT, and alternate evaluation strategies. Two Special Education and one Measurement and Evaluation experts from Paul University, Awka validated instruments. Ten teachers and 15 kids from a comparable special school outside Onitsha pilot-tested the questionnaire. Cronbach's Alpha will be calculated with a target coefficient of ≥0.70. Member checking and triangulation of instructor, student, and document data ensured credibility, transferability, and dependability. SPSS v26 analysed quantitative data. Statistics—frequency, percentage, mean, standard deviation—summarize evaluation methods and obstacles. Where applicable, chi-square and t-test test associations. A thematic analysis was used on qualitative data. Transcriptions, codes, and themes on challenges and innovations will be created from interviews and FGDs. Teacher and student parent approval will be requested in writing. Additionally, student consent was obtained.

Presentation and Analysis of Data

This section presents the findings of the study on assessment and performance evaluation techniques for students with hearing and speech impairment in Special School Onitsha. Data were collected from 25 teachers and 60 students across SS1–SS3 using a structured questionnaire, student assessment record checklist, and follow-up interviews. Quantitative data were analyzed using frequency counts, percentages, mean scores, and standard deviations. A decision benchmark mean of 2.50 was used for interpreting responses. Inferential statistics (Chi-square and t-test) were employed to test the hypotheses at the 0.05 level of significance, while qualitative data obtained through interviews and focus group discussions were analyzed thematically.

Table 1

Demographic Profile of Teacher Respondents (N = 25)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	10	40.0
	Female	15	60.0
Teaching Experience	1–5 years	6	24.0
	6–10 years	10	40.0
	11–15 years	5	20.0
	16 years and above	4	16.0
Qualification	NCE (Special Education)	8	32.0
	B.Ed. (Special Education)	12	48.0
	M.Ed. (Special Education)	3	12.0
	Other Qualifications	2	8.0
Sign Language Proficiency	Fluent	6	24.0
	Intermediate	12	48.0
	Basic	7	28.0

Analysis of Table 1

Table 1 shows that 15 (60.0%) of the teachers were female, while 10 (40.0%) were male. This indicates that female teachers constituted the majority of the respondents. Concerning teaching experience, 10 (40.0%) had between 6 and 10 years of teaching experience, followed by 6 (24.0%) with 1–5 years of experience, 5 (20.0%) with 11–15 years, and 4 (16.0%) with over 16 years of experience.

With respect to educational qualifications, 12 (48.0%) possessed a Bachelor of Education degree in Special Education, while 8 (32.0%) held NCE qualifications in Special Education. Only 3 (12.0%) had Master's degrees in Special Education. Regarding sign language proficiency, only 6 (24.0%) teachers reported being fluent in sign language, while 12 (48.0%) had intermediate proficiency and 7 (28.0%) possessed only basic proficiency. This suggests that although most teachers are professionally trained in special education, a considerable proportion may still experience communication difficulties when assessing students with hearing and speech impairment.

Table 2

Demographic Profile of Student Respondents (N = 60)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	32	53.3
	Female	28	46.7
Class Level	SS1	20	33.3
	SS2	22	36.7
	SS3	18	30.0
Degree of Hearing Loss	Profound	25	41.7

	Severe	20	33.3
	Moderate	10	16.7
	Mild	5	8.3
Primary Communication Mode	Nigerian Sign Language	35	58.3
	Lip-reading	12	20.0
	Total Communication	10	16.7
	Written English	3	5.0

Analysis of Table 2

Table 2 reveals that 32 (53.3%) of the student respondents were male, while 28 (46.7%) were female. The distribution across class levels indicates that 22 (36.7%) students were in SS2, 20 (33.3%) were in SS1, and 18 (30.0%) were in SS3.

The table further shows that 25 (41.7%) students had profound hearing loss, while 20 (33.3%) had severe hearing loss. Together, students with severe and profound hearing loss constituted 75.0% of the sample. In terms of communication mode, 35 (58.3%) students primarily used Nigerian Sign Language, followed by 12 (20.0%) who relied on lip-reading. This finding demonstrates the importance of sign language as the major communication medium among the students and highlights the need for assessment practices that accommodate sign language users.

Research Question One

What assessment techniques are used for students with hearing and speech impairment in Special School Onitsha?

Table 3

Teachers' Ratings of Assessment Techniques Used for Students with Hearing and Speech Impairment (N = 25)

S/N	Assessment Technique	Mean	SD	Decision
1	Written examinations (modified English)	3.52	0.65	Frequently Used
2	Sign language-based oral assessments	2.48	0.92	Occasionally Used
3	Practical/performance-based assessments	3.20	0.76	Frequently Used
4	Portfolio assessment	2.15	0.88	Rarely Used
5	Observational assessment during lessons	3.35	0.70	Frequently Used
6	Visual/project-based assessments	3.10	0.81	Frequently Used
7	Peer assessment	1.95	0.84	Rarely Used
8	Self-assessment using visual rubrics	1.88	0.79	Rarely Used
	Grand Mean	**2.70**	**0.79**	**Used**

Decision Rule: Mean score of 2.50 and above = Accepted; Mean score below 2.50 = Rejected.

Analysis of Table 3

Table 3 presents teachers' ratings on the assessment techniques used for students with hearing and speech impairment. The findings indicate that written examinations recorded the highest mean score (M = 3.52, SD = 0.65), showing that it is the most frequently used assessment technique. Observational assessment during lessons (M = 3.35, SD = 0.70), practical/performance-based assessments (M = 3.20, SD = 0.76), and visual/project-based assessments (M = 3.10, SD = 0.81) were also frequently utilized.

In contrast, portfolio assessment (M = 2.15, SD = 0.88), peer assessment (M = 1.95, SD = 0.84), and self-assessment using visual rubrics (M = 1.88, SD = 0.79) recorded mean scores below the benchmark and were therefore rarely used. Sign language-based oral assessment obtained a mean score of 2.48, slightly below the criterion mean, indicating inconsistent use.

The grand mean score of 2.70 suggests that while several assessment techniques are employed in the school, assessment practices remain largely dominated by written examinations and teacher-directed approaches.

Interview Findings

A teacher stated:

"We mostly use written tests because that is what the examination board requires. Sign language assessment is not formalized, so we use it informally during lessons."

The interview response supports the quantitative findings that written examinations remain the dominant assessment method despite the communication needs of learners with hearing impairment.

Research Question Two

What challenges affect effective assessment and performance evaluation of students with hearing and speech impairment in Special School Onitsha?

Table 4

Teachers' Ratings of Challenges Affecting Assessment and Performance Evaluation (N = 25)

S/N	Challenge Item	Mean	SD	Decision
1	Lack of assistive technologies	3.68	0.56	Severe Challenge
2	Insufficient teacher training in adaptive assessment methods	3.60	0.64	Severe Challenge
3	Communication barriers between teachers and students	3.52	0.71	Severe Challenge
4	Inadequate standardized assessment tools	3.45	0.68	Severe Challenge
5	Overcrowded classrooms	3.20	0.82	Moderate Challenge
6	Limited time for alternative assessments	3.15	0.85	Moderate Challenge
7	Low parental involvement	2.95	0.90	Moderate Challenge
8	Lack of sign language interpreters	3.58	0.62	Severe Challenge
	Grand Mean	**3.39**	**0.72**	**Severe Challenge**

Analysis of Table 4

Table 4 shows that all the identified factors constituted challenges to effective assessment and performance evaluation of students with hearing and speech impairment. The most severe challenge was lack of assistive technologies (M = 3.68, SD = 0.56), followed by insufficient teacher training in adaptive assessment methods (M = 3.60, SD = 0.64), lack of sign language interpreters (M = 3.58, SD = 0.62), and communication barriers between teachers and students (M = 3.52, SD = 0.71).

The grand mean score of 3.39 indicates that respondents generally perceived the identified factors as serious obstacles to effective assessment. This finding suggests that assessment difficulties are largely associated with inadequate resources, limited professional capacity, and communication constraints within the school environment.

Interview Findings

A student communicated through an interpreter:

"When we write tests, the English is hard. The teacher does not explain in sign language what the question means. I know the answer but I cannot write it well in English."

Similarly, a teacher stated:

"We try our best, but we are not trained in how to assess deaf students properly. There are no special assessment tools. We just modify the same written exams used in mainstream schools."

These responses reinforce the quantitative findings that communication barriers, inadequate training, and lack of specialized assessment resources significantly hinder effective assessment practices

Discussion of Findings

This study's findings are compared to research objectives, hypotheses, theoretical framework (Communicative Reciprocity Theory of Behaviour and Universal Design for Learning), and empirical literature.

The study indicated that hearing and speech-impaired students in Special School Onitsha predominantly take written, observational, practical, and visual/project-based evaluations. This supports Ali, Nazir, and Haq (2024), who found special education teachers adapt and supervise written assessments. Underused portfolio (M = 2.15), peer (1.95), and self-evaluation (1.88), limit assessment range. This violates Power-deFur (2023)'s multidimensional and customised special education evaluation principles.

Sign language-based oral evaluations are rare (M = 2.48) despite 58.3% of students speaking Nigerian Sign Language as their first language. The modality mismatch between student communication and assessment supports Green's (2026) Communicative Reciprocity Theory of Behaviour (CRT-B), which states that misaligned communication systems generate assessment failures.

The biggest issues were absence of assistive technology (M = 3.68), teacher training in adaptive assessment (M = 3.60), sign language interpreters (M = 3.58), and communication hurdles (M = 3.52). Previous research confirms this. Communication and surroundings significantly affect deaf learners' assessment performance, argue Neild and Clark (2020). Casoojee, Khoza-Shangase, and Kanji (2024) found that sign language-assisted students scored higher.

Special School Onitsha's lack of assistive technology shows Nigerian special education issues. Ali et al. (2024) report financing and technology issues. The CRT-B construct of communicative accessibility is supported by 24% of instructors' sign language proficiency, which hinders communication. CRT-B shows inaccessible communication hinders learning and performance.

The grand mean of 2.23 reveals that present evaluation methods fail. Students and teachers agreed that current techniques are unjust (M = 1.95 and inaccurate) (M = 2.15) Stefánsdóttir et al. (2024) observed that speech intelligibility and academic assessment of hearing-impaired students vary by technique and lack uniform instruments, compromising reliability.

Teacher and student effectiveness perceptions differ (t = -2.94, p = 0.004), which is important. Students scored 1.95 efficacy versus 2.23 for teachers, a disadvantage during evaluation. This expands CRT-B reciprocal recognition: professors may think they're judging fairly, but students think they're unfair.

Regular adaptive assessment, assistive technology integration, sign language-based assessment, and visual/project-based assessment training were supported by most teachers (M = 3.80). These findings corroborate Rose and Meyer (2000)'s Universal Design for Learning (UDL) framework, which promotes various representations, activities, and interaction.

The rejection of H_{03} ($p < 0.001$) suggests that creative strategies enhance performance evaluation. Damri et al. (2023) increased hearing-impaired student assessment accuracy and consistency with digital technology. Digital innovation in inclusive education was highlighted by UNESCO (2024).

The findings significantly support the Communicative Reciprocity Theory of Behaviour (Green, 2026). Communication hurdles, sign language interpreters, and teacher training affect CRT-B communicative accessibility, reciprocal recognition, and environmental responsivity. According to the idea, communication breakdown causes low academic achievement in evaluation settings, not learner incompetence. Student statements like “I know the answer but I cannot write it well in English” showed this.

UDL is supported. Due to UDL's multimodal action and expression approach, visual, practical, and sign language evaluations are common. Basic UDL argument: over-reliance on written tests is a system issue, not a student weakness. This study supports Tronstad et al. (2022), who demonstrated that hearing-impaired students learn better with specialised instruction and adaptation. Baniaturrohmah et al. (2023) recommended tailored and flexible testing for hearing-impaired students.

This analysis implies a resource scarcity worse than several developed nations. Damri et al. (2023) used digital evaluation tools at Special School Onitsha without basic assistive technologies. This gap shows Nigerian special education's contextual creative evaluation limits.

The findings have several implications:

1. For Practice: Current assessment practices are inadequate and unfair. Teachers urgently need training in sign language and adaptive assessment methods.

2. For Policy: The government must provide assistive technologies, sign language interpreters, and standardized assessment tools for special schools.

3. For Theory: The study empirically validates CRT-B and UDL frameworks within a Nigerian special education context, extending their applicability beyond Western settings.

4. For Students: Without innovation, students with hearing and speech impairment will continue to be unfairly evaluated, limiting their educational and life opportunities.

The findings confirm that students with hearing and speech impairment in Special School Onitsha face substantial assessment barriers rooted in communication inaccessibility, resource scarcity, and inadequate teacher preparation. The Communicative Reciprocity Theory of Behaviour and Universal Design for Learning provide robust frameworks for understanding these challenges and guiding innovative solutions. Without fundamental changes in assessment practices, these learners will continue to be educationally disadvantaged.

6. Conclusion

This study found that Special School Onitsha's assessment and performance evaluation methods for hearing and speech-impaired pupils are too narrow and unsuitable for their communication needs. Written exams, observational assessments, practical assignments, and visual projects are widespread, but portfolio assessments, peer assessments, self-assessments, and sign language-based oral assessments are rare. This small range of methods fails to capture students' full knowledge and abilities, especially as most learners use Nigerian Sign Language. Overusing conventional written assessments shows a disconnect between how pupils learn and how they are graded.

The study also finds that substantial challenges hinder school assessment and performance evaluation. Chronic lack of assistive devices, insufficient teacher training in adaptive assessment methods, lack of certified sign language interpreters, and teacher-student communication hurdles. Thus, present evaluation techniques are ineffective, unfair, and unable to appropriately assess students' intellectual talents. Students think the assessment procedure is worthless, even worse than teachers. The strong correlation between assessment challenges and poor academic performance shows that poor communication and resources hurt education.

Teachers strongly supported regular training on adaptive methods, integration of assistive technologies, development of sign language-based assessment tools, and use of visual and project-based evaluations. The study supports the Communicative Reciprocity Theory of Behaviour (CRT-B) and Universal Design for Learning (UDL) frameworks by showing that assessment failures are environmental and systemic, not learner-related. Unfair evaluation, undervalued potential, and limited educational development for hearing and speech impaired kids in Special School Onitsha will persist without urgent institutional commitment to innovation, resource provision, and teacher capacity building.

Recommendations

1. The school should adopt an inclusive assessment system that uses Nigerian Sign Language, portfolios, visual tasks, and practical demonstrations alongside limited written tests. This ensures deaf learners can express knowledge in their preferred communication mode. Assessment should be balanced and accessible to all learners.
2. Government and school authorities should provide assistive technologies, employ sign language interpreters, and reduce class sizes for effective individualized assessment. Standardized tools designed for learners with hearing and speech impairments should also be developed. Parental involvement should be strengthened to support learning at home.

3. Teachers should receive continuous training in adaptive assessment, Universal Design for Learning, and formative evaluation strategies. Regular review of assessment outcomes and student feedback should guide improvement in teaching and evaluation. This will ensure fairness and instructional effectiveness.

4. The school should integrate innovative technology such as digital portfolios and captioning tools, progressing toward advanced sign language-based applications. Collaboration with universities and donors should support development and funding of these tools. This will enhance modern, inclusive, and sustainable assessment practices.

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