International Journal of Research Publication and Reviews

Enhancing Educational Practices: Utilizing Assessment Data to Inform Instructional Strategies for Teachers in Primary Schools for the Deaf in Kenya

Lornah Irene Ayako

PhD Student, Department of Counseling Psychology
The Catholic University of Eastern Africa

ABSTRACT

Assessments play a crucial role in informing instructional strategies for teachers of deaf learners. By analyzing assessment data, teachers can gain valuable insights into their learners' strengths, weaknesses, and individual learning needs. This study aimed to investigate the use of assessment data in guiding teaching practices for educators working in primary schools specifically catering to deaf learners. It examined how teachers can effectively utilize assessment data to tailor instructional strategies that meet the unique needs of deaf learners. The study was anchored on Bowlby's attachment theory and employed a qualitative approach, descriptive research design. The study targeted teachers in primary schools for the deaf in Kenya. Purposive sampling design was used to get a sample 12 respondents from potential participants who were willing and met the requirements needed for participation in the survey. Data was collected using in -depth interview and analyzed thematically. The findings revealed that assessment data serves as a valuable tool for teachers of deaf learners, allowing them to individualize instruction, set appropriate goals, monitor progress, and make informed instructional adjustments. The study recommends developers of assessment data for the deaf learners to come up with a comprehensive approach that involves collaboration among educators, specialists, and the deaf community.

Keywords: Assessment Data, Teaching, Primary Schools, Deaf Students, Instructional Strategies, Educational Practices.

Introduction

Assessment plays a central role in ensuring effectiveness of learning and teaching (Black & William, 2018).Assessment starts during a lesson. A teacher may ask a question to assess if learners have understood. According to Abrams, Varier and Jackson (2016) assessment is fundamental for the accurate measurement of student learning. Teachers gather and analyze data about learners all year and in many ways, including notes, test results, grades, and observations. Assessment data serves as a valuable resource for teachers, enabling them to gain insights into the individual learning needs of learners and tailor instructional strategies accordingly. Utilizing Assessment data to inform instructional strategies better known as Data-Driven Decision Making (DDDM) is defined as the systematic analysis of student data from internal and/or external sources of a school to drive teachers' educational planning and practices (Prenger & Schildkamp, 2018).Assessment data that is significant conveys a snapshot of what learners are familiar with, what they are supposed to know, and what they have not been acquainted to. This is an important aspect of educational research and practice. Mandinach and Schildkamp (2020) purport that for approximately two decades, data-based decision making has developed as a key field in education. Harris (2018) echoes that teachers can focus on student learning by creating a data-based environment that can drive academic excellence. The key is to utilize assessment data as a valuable tool for understanding students' needs, monitoring progress, and adapting instruction to optimize student learning outcomes. Teachers who comprehend assessment data, are set to make decisions that inform instruction and positively affect student outcomes.

According to Kippers, Poortman, Schildkamp and Visscher (2018) teachers are required to have the knowledge on how to use data effectively to inform their practice. They add that a positive attitude towards data-based decision making is considered crucial. Cho, Jimerson and Wayman (2015) express that knowledge of use of assessment data is critical for understanding on how school teachers respond to accountability pressures.

Assessment data helps teachers understand the specific areas where learners may be struggling or excelling. It provides valuable information about their language, literacy, communication, and cognitive abilities. This enables teachers to tailor their instruction to meet the unique needs of each learner. Bratsch et al. (2017) found that when educators use learner assessment data to plan for instruction and design curriculum there are positive impacts on student achievement.

Assessment data allows teachers to set realistic and achievable goals for learners. Sun, Przybylski and Johnson (2016) voice that teachers use data to evaluate learners' performance, plan and develop instructional goals, improve instruction, and detect behavioral and social issues in students. By analyzing the assessment results, teachers can identify areas that require improvement and establish measurable objectives for their learners. This helps in creating targeted instructional plans.

In addition, assessment data helps teachers design differentiated instruction that caters to diverse learning needs. Farrell and Marsh (2016) elaborate that assessment data can be useful to teachers for sorting students into ability groups. By understanding the strengths and weaknesses of individual learners, teachers can provide appropriate learning materials, strategies, and accommodations. Based on data, teachers adapt instructions to the needs of students which can lead to increased achievement (Prenger & Schildkamp, 2018). This will ensure that learners receive instruction that is tailored to their abilities and fosters their overall development.

Regular assessments enable teachers to monitor the progress of learners over time. Gallagher, Means and Padilla (2008) agree that student achievement data are valuable for teachers to track the progress of individual students. By comparing current performance with previous assessment data, teachers can determine if instructional strategies are effective or if adjustments are needed. Progress monitoring helps in adapting teaching methods and interventions to ensure continuous growth.

Assessment data provides insights into the effectiveness of instructional approaches. The importance of using data as 'evidence' to inform teaching practices has been acknowledged in the broader literature (Mandinach & Schildkamp, 2020). If certain strategies are not yielding desired outcomes, teachers can use assessment data to make informed adjustments. They can modify teaching methods, incorporate new strategies, or provide additional support to address specific learning challenges. According to Lewis, Wheeler and Carter (2017) improvement in learning of learners with special needs can be made possible by providing differentiated instructions and applying an individual approach. Al-Subaiei, (2017) alludes that lessons for classes with learners with disabilities have to include differentiation practices.

Assessment takes part in an introductory part in special education. McLeskey, J., et al.(2017) explains that learners who are abled differently are multifaceted learners who have exclusive needs that exist in conjunction with their strengths. Teachers for special needs learners are required to fully understand those strengths and needs and be knowledgeable regarding assessment and interpreting data. Information from assessment data needs to be seen by teachers as something that informs teaching and learning, rather than as a reflection of the capability of individual students and to be used for sorting, labelling and credentialing (Timperley, et al. 2008).

While assessment plays a vital role in educational systems, there is often a disconnect between assessment practices and instructional strategies. Many educators may struggle to effectively utilize assessment data to inform their teaching approaches. Consequently, this disconnect can limit the ability to address the diverse learning needs of deaf learners, potentially leading to educational disparities and hindered academic growth. Research on the effectiveness of data driven instructions in schools is limited. This study seeks to contributes to a body of more information on making use of assessment data to inform instructional strategies for teachers in primary schools for the deaf.

Objectives

The focus of this research is to draw information on the use of assessment data in guiding teaching practices for teachers working in primary schools specifically catering to deaf learners in Kenya. The study seeks to answer the following questions

1. Are teachers in primary schools for the deaf familiar with the concept of using assessment data to inform instructional strategies in your classroom?

2. Are teachers using assessment data to adjust your instructional strategies?

3. What are the benefits of using assessment data to inform instructional strategies?

4. What challenges do teachers in primary schools for the deaf face in using assessment data to inform instructional strategies?

5. What resources or support can be given to teachers in primary schools for the deaf to use assessment data to inform instructional strategies more effectively?

Theoretical Framework

This study was established on the foundation of differentiated Instruction. Differentiated instruction recognizes that learners have diverse learning needs, interests, and readiness levels. Assessment data can be used to identify individual student strengths and weaknesses, allowing teachers to adjust their instructional strategies accordingly. By using formative assessments, teachers can gather ongoing data to inform differentiated instruction, providing targeted support and challenges to meet the unique needs of each learner.

Methodology

This study was qualitative in nature. Qualitative interviews are considered as noteworthy source of data in this study as the researcher assembled information associated with the thoughts and participants' deeper views on ideas related to utilizing assessment data to inform instructional strategies. The target population were primary school teachers in schools for the deaf in Kenya. A purposeful sampling was used to recruit 12 (Cresswell, 2018) teachers for deaf learners of grades 4-6. The respondents' insights were captured through semi - structured interviews from March 2023 to April 2023.The interviews were less structured to encourage the interviewees to express with greater feelings and thoughts. Each interview took 40 - 50 minutes.

Emergent themes were identified through an open coding process, and trustworthiness was secured through member checking (Yin,2014) to uphold precise presentation of information.

Ethical Consideration

The study was carried out after the researcher was given permission with relevant authorities. The respondents gave informed consent of participating in the study. The respondent's names, and address were kept anonymous. The researcher also took into account the rights and wellbeing of the respondents.

Results

Teachers use assessment data as one of the most powerful tools in their classrooms. On being familiar with the concept of using assessment data to inform instructional strategies in classroom, all participants revealed that they are conversant. A participant voice,

"Yes, I do." (Participant 12, personal communication, April 15, 2023).

Another participant declared,

"I have the knowledge of it." (Participant 07, personal communication, March 28, 2023).

The performance of learners can be improved by using data in instructional decisions. On the scope of using assessment data to adjust on their instructional strategies, the participants, their reactions showed discrepancies . A participant said,

"*Since there are no strict rules on using them, I use when I feel it is necessary".* (Participant 01, personal communication, March 03, 2023).

Another participant uttered,

"I use them routinely to help me with instruction." (Participant 10, personal communication, April 20, 2023).

A different participant expressed,

"I prefer using it when starting a new term."(Participant 08, personal communication, January 25, 2023).

One more articulated,

"*My pattern of using assessment data is very limited. I have to or I need to understand what the assessment data entails and only then I can have a horizontal flow of where to use it assessment".* (Participant 12, personal communication, April 15, 2023).

The predominant themes associated with usefulness of assessment data that emerged include: Individualized Instruction, Differentiated Instruction, Formative Assessment, Targeted Intervention, Curriculum Planning and Design, Instructional Decision-Making, Professional Development and Accountability and Evaluation.

Participants reported that assessment data allows teachers to identify the strengths and weaknesses of individual learners. All types of data can help guide teachers in their lesson planning. Teachers are obliged to take into account skill deficiencies, learners who exceed expectations, meet expectations, approach expectations and are below expectations as well as their interest. From the outcomes, teachers are able to develop lessons that are the center of attention on the learning areas of a learner. One participant expressed,

"Information in the data helps in me in tailoring instruction to meet the specific needs of each learner, providing personalized learning experiences and targeted interventions." (Participant 05, personal communication, March 20, 2023).

Teachers need sufficient knowledge of the meaning of the assessment data to make appropriate adjustments to practice. Participants revealed that teachers used assessment data to help in identification of variations in learners' abilities, learning styles, and preferences. One expressed,

"I use assessment data to adapt instructional strategies, materials, and activities so that I can accommodate the diverse needs of my learner". (Participant 03, personal communication, March 12, 2023).

Another participant voiced,

"With assessment data, it makes it easier to plan instructions which will ensure that all learners can access and engage with the content effectively". (Participant 11, personal communication, April 15, 2023).

Participants emphasized that assessment data provided ongoing feedback on learner's progress and understanding. One respondent revealed,

"I use formative assessment techniques to gather real-time data, adjust instruction, and provide timely feedback to the learners." (Participant 08, personal communication, April 04, 2023).

Another participant revealed,

"With formative assessment I am able to advice learners on their performance which enables them make necessary adjustments". (Participant 09, personal communication, April,09 2023).

Data from assessments provide perceptiveness into how classroom instruction should meet the needs of the learners. Participants conveyed that with assessment data they were able to detect specific areas where learners could be straining or had insufficient ability. One stated,

"They make it possible for me to design targeted interventions and support systems to address individual or group needs". (Participant 01, personal communication, March,04 2023).

A different pointed out expressed,

"Evaluating assessment data provides additional instruction to help learners overcome challenges". (Participant 06, personal communication, March 24, 2023).

Data from assessments helps a teacher determine if the prepared instruction is effective and if there is need to change something in the teaching pedagogy. Participants communicated that assessment data informs the design and modification of curriculum materials and instructional resources. A participant uttered,

"By analyzing the data, I can identify areas where the curriculum may need adjustments or enhancements to better align with learners needs and learning objectives". (Participant 10, personal communication, April, 12 2023).

Participants also shared that assessment data plays a crucial role in guiding instructional decision-making. One stated,

"After analyzing the assessment data, I can determine the effectiveness of instructional strategies". (Participant 02, personal communication, March 07, 2023).

A new participant declared,

"Examination of assessment data helps me identify areas of improvement, and make informed choices about instructional approaches". (Participant 07, personal communication, March, 28 2023).

Another participant commented,

"To come up with an ideal methodology, and resources for a strand. I assess the assessment data". (Participant 04, personal communication, April 17, 2023).

Teacher professional development is one way that teachers can improve their skills and, in turn, boost learner outcomes Participants alluded that assessment data provides them with a guide for professional development initiatives. One participant mentioned,

"By examining the data, I can identify areas where I may need additional support or training." (Participant 12, personal communication, April 15, 2023).

Accountability is the backbone to all teachers' efforts to achieve equitable, quality education for all. Participants indicated that assessment data contributed to their accountability and evaluation processes. A participant remarked,

"Assessment data is part of my professional documents." (Participant 04, personal communication, March 17, 2023).

Another participant concealed,

"Assessment data allows me to monitor my learners'. (Participant 09, personal communication, April 4, 2023).

A different participant voiced,

"Through assessment data I am able to make data-informed decisions at the classroom or school about a learner. This comes in handy for suitable placement". (Participant 08, personal communication, January 25, 2023).

There was a distinct awareness among the participants in terms of the challenges they faced in associated with utilizing assessment data. Themes which came out were: Limited Assessment Tools, Individualized Instruction and Inclusion of Deaf Culture and Community.

The participants constructed their exposure to utilizing assessment data as not specifically designed to assess the learning needs and progress of deaf learners. One put across,

"Some assessments may not adequately capture their abilities, skills, and areas of challenge, leading to incomplete or inaccurate data". (Participant 05, personal communication, April 20, 2023).

Adapting tools to the learner's ability, enables them to become less discouraged and their frustration levels are lowered. Adapting tools warrants that the assessment data gathered during progress monitoring is truthful. According to most participants, deaf learners often require individualized instructional approaches tailored to their unique communication needs and learning styles. On sadly expressed,

"Assessment data may not always provide the level of detailed information needed to customize instructional strategies effectively". (Participant 10, personal communication, April 12, 2023).

In general, the participants pointed out that at times they experienced challenges in understanding how to effectively use assessment data to inform instructional strategies specific to the needs of deaf students can be a challenge without the necessary data literacy skills.

Participants mentioned that assessment data and instructional strategies for deaf learners were not sensitive to their cultural and linguistic backgrounds. A participant lamented,

"Most of the materials we use do not recognize the importance of deaf culture and involving the deaf community in the assessment and instructional process". (Participant 03, personal communication, March 12, 2023).

On support in use assessment data to inform instructional strategies, themes brought forward were Data Literacy Training, Access to Quality Assessment Tools, Data Analysis Support, Collaboration and Professional Learning Communities, Professional Development and Time and Resources.

Participants mentioned that there is need for teacher training to develop their data literacy skills, including the ability to interpret, analyze, and draw meaningful insights from assessment data. A participant alluded,

" KNEC can organize for training which puts focus on understanding different types of assessments, data analysis techniques, and using data to inform instructional decision-making". (Participant 07, personal communication, March 28, 2023).

Another one suggested,

"There is need to incorporate data literacy skills in the curriculum of teacher training". (Participant 10, personal communication, April 12, 2023).

Participants pointed out the need for valid and reliable assessment tools that align with the specific learning needs of their students. A participant denoted,

"Having access to a variety of assessment tools, including formative and summative assessments, can help gather a comprehensive picture of learners' progress and inform instructional strategies accordingly". (Participant 11, personal communication, April 15, 2023).

Certain data can help answer one question but not another. It is essential for a teacher to be aware in modes that a particular can and cannot be used so that they are in a position to identify academic difficulties more accurately and then respond to them. Participants suggested that there was need for data analysis support. One described,

" From this, teachers may benefit from support in analyzing assessment data, especially if they are dealing with large volumes of data or complex data sets". (Participant 09, personal communication, January 25, 2023).

A different participant submitted,

"If we can have data analysis tools, software, or professional development sessions to help teachers make sense of the data and identify patterns or trends, it will make our work easier and more reliable". (Participant 04, personal communication, March 17, 2023).

Schools use collaborative approaches to make data work for them. It also came up that teachers be given programs to collaborate with other teachers and engage in professional learning communities can foster the sharing of best practices and insights on using assessment data. One participant displayed,

"If we can create a collaborative environment that will allow us to learn from each other, discuss instructional strategies, and collectively analyze assessment data to inform their practice". (Participant 15, personal communication, March 15, 2023).

Participants also revealed it was necessary for teachers to have continuous professional development. A participant imparted,

"Professional development will make us stay updated on the latest assessment practices." (Participant 02, personal communication, March 07, 2023).

Another participant agreed,

"TPD programs being offered can include optics such as assessment design, data analysis techniques, data-driven instruction, and the integration of assessment data into instructional planning". (Participant 09, personal communication, April 12, 2023).

Time and Resources was a theme that was mentioned severally. All the participants expressed

Adequate time and resources are essential for teachers to effectively utilize assessment data. One participant expressed,

"Teachers need dedicated time to review and analyze data, reflect on instructional practices, and plan targeted interventions based on the data." (Participant 06, personal communication, March 24, 2023).

Another participant verbalized,

"Internet is expensive, I wish the government provides internet in schools since data management goes in handy with technology to efficiently manage and analyze assessment data." (Participant 01, personal communication, March 03, 2023).

Discussion

By utilizing assessment data effectively, teachers can make evidence-based decisions that positively impact learner achievement and growth. This is in line with Schildkamp (2019) who asserts that data-based decision-making in education often focuses on the use of summative assessment data in order

to bring about improvements in student achievement. Assessment data serves as a valuable tool for teachers of deaf learners, allowing them to individualize instruction, set appropriate goals, monitor progress, and make informed instructional adjustments. This finding corresponds with Pantiwati and Husamah (2017) who indicate that assessment is carried out to find out the success of learning, and it gives information regarding students' mixed abilities that can be used as a guide to improve learning for achieving teaching and learning goals. As a result of leveraging assessment data effectively, teachers can optimize learning experiences and outcomes for their deaf learners. The finding is sustained by Gallagher, Means and Padilla (2008) who agree that student achievement data are valuable for teachers to track the progress of individual students. By bridging the gap between assessment and instruction, teachers can create inclusive and empowering learning environments that address the diverse needs of deaf learners, leading to improved educational experiences and outcomes. Chan et al. (2018) express that teachers are the main facilitators who can confirm and ensure the assessment process is performed smoothly and accordingly in class

It is essential to provide teachers with the necessary training, resources, collaboration opportunities, and supportive leadership. This is supported by Kippers, Poortman, Schildkamp and Visscher (2018) who echoes that teachers are required to have the knowledge on how to use data effectively to inform their practice. Teachers can enhance their ability to use assessment data effectively to inform and improve instructional strategies, ultimately leading to better learner outcomes.

Recommendation

The developers of assessment data for the deaf learners need to come up with a comprehensive approach that involves collaboration among teachers, specialists, and the deaf community. It is essential to develop and utilize assessment tools specifically designed for deaf learners, provide appropriate accommodations, invest in professional development for learners, and foster an inclusive learning environment that respects deaf culture and language.

There is need for further research in this area, as well teacher professional development on how to translate assessment data into information that can inform instructional planning.

References

Abrams, L., Varier, D., & Jackson, L.(2016). Unpacking instructional alignment: The influence of teachers' use of assessment data on instruction.

Al-Subaiei, M.S.(2017).Challenges in mixed ability classes and strategies utilized by ELI teachers to cope with them *English Language Teaching*.10(6),182-189.

Black, P., & William, D. (2018).Classroom assessment and pedagogy. Assess. Educ. Princip. Pol. Pract. 25,551-575.doi:10.1080/0969594x.2018.1441807

Chan, S., Bax, S., & Weir, C. (2018). Researching the comparability of paper-based and computer-based delivery in a high-stakes writing test. Assessing Writing, 36, 32-48. 10.1016/j.asw.2018.03.008 .

Cho, V., Jimerson, J.B. & Wayman, J.C. 2015. Data system implementation: A leader navigates people problems around technology and data use. *Journal of Cases in Educational Leadership,* 18(2), 134-143. https://doi.org/10.1177/1555458915584677 .

Cresswell, J.W. & Creswell, J.D (2018).Research design: Qualitative, Quantitative and mixed methods approach (5ᵗʰ ed). Thousands Oaks: *SAGE*

Croft, M., and Beard, J. J. (2022). "Development and evolution of the SAT and ACT," in *The History of Educational Measurement: Key Advancements in Theory, Policy, and Practice*. eds. B. E. Clauser and M. B. Bunch (New York: Routledge).

Bratsch, H. M. E., Vernon, F. L., Varghese., C., & Garwood., J. (2017). Child skills and teacher qualifications: Associations with elementary classroom teachers' reading instruction for struggling readers. Learning Disabilities Research & Practice (Wiley-Blackwell), 32(4), 270–283. doi:10.1111/ldrp.12136.

McLeskey, J., Barringer, M-D., Billingsley, B., Brownell, M., Jackson, D., Kennedy, M., Lewis, T., Maheady, L., Rodriguez, J., Scheeler, M. C., Winn, J., & Ziegler, D. (2017). High-leverage practices in special education**.** Arlington, VA: Council for Exceptional Children & CEEDAR Center.

MuñozI, D.R., & Araya, D.H. (2017). The challenges of competence-based assessment in the educational field. *Educ. Pesqui., São Paulo.* 1073-1086.

Datnow, A., & Hubbard, L. (2015). Teachers' Use of Assessment Data to Inform Instruction: Lessons from the past and Prospects for the Future. *Teachers College Record*, *117*(4), 1–26.

Farrell, C.C., & Marsh, J.A. (2016). Contributing conditions: A qualitative comparative analysis of teachers' instructional responses to data. Teaching and Teacher Education 60(3).

Gallagher, L., Means, B., & Padilla, C. (2008). Teachers' use of student data systems to improve instruction: 2005 to 2007. *US Department of Education*. Jessup, MD.

Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J.(2009).

Using student achievement data to support instructional decision making.

Harris, L.M. (2018).Perceptions of Teachers about Using and Analyzing Data to Inform

Instruction. *Walden Dissertations and Doctoral Studies.* Walden University.

Kippers, W. B., Poortman, C. L., Schildkamp, K. & Visscher, A. J. (2018). Data literacy:

What do educators learn and struggle with during a data use intervention? *Studies in Educational Evaluation,* 56(1), 21-31. https://doi.org/10.1016/j.stueduc.2017.11.001.

Lewis, R.., Wheeler, J.J., & Carter, S.L.(2017).Teaching students with special needs in general education classrooms. New York, NY: Pearson.

Mandinach, E. B. & Schildkamp, K. (2020). Misconceptions about data-based decision making in education: An exploration of the literature. *Studies in Educational Evaluation*, online first. https://doi.org/10.1016/j.stueduc.2020.100842

Pantiwati, Y., & Husamah. (2017). Self and Peer Assessments in Active Learning Model to Increase Metacognitive Awareness and Cognitive Abilities. *International Journal of Instruction,* 10(4),185-202. https://doi.org/10.12973/iji.2017.10411a

Prenger, R., & Schildkamp, K. (2018). Data-based decision making for teacher and student learning: a psychological perspective on the role of the teacher, *Educational Psychology*, DOI: 10.1080/01443410.2018.1426834.

Schildkamp, K.(2019). Data-based decision-making for school improvement: Research insights and gaps. *Educational Research.* DOI: 10.1080/00131881.2019.1625716.

Sun, J., Przybylski, R., & Johnson, B. J. (2016). A review of research on teachers' use of student data: from the perspective of school leadership. *Educational Assessment, Evaluation and Accountability.* 28(1), 5-33.

Timperley, H. S. (2008). Teacher professional learning and development. The Netherlands: International Academy of Education / *International Bureau of Education.*

Yin, R. K. (2014). Case study research: Design and methods (5th ed.). Thousand Oaks, California: SAGE. [6th ed.] https://au.sagepub.com/en-gb/oce/case-study-researchand-applications/book250150.