

Alternative assessment challenges of teachers in inclusive senior high schools in Northern Ghana

Isaac Attia¹, Maxwell Kwesi Nyatsikor^{2*} and Richard Amoako³

¹Department of Education, Gambaga College of Education, North-East Region, Ghana.

²Department of Humanities and Social Sciences Education, Faculty of Education, University for Development Studies, Tamale, Ghana.

³Department of Teacher Education, Faculty of Educational Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

*Corresponding author. Email: mnyatsikor@uds.edu.gh

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Received 28th July 2022; Accepted 4th September 2022

ABSTRACT: The paper presents findings of teachers' challenges in using alternative assessment procedures to assess learners with visual impairment in two purposively sampled inclusive senior high schools in the Northern part of Ghana with particular reference to Sirugu and Wa Senior High Schools in the Upper East and Upper West Regions, respectively. The study's population comprised teachers in inclusive senior high schools in Ghana. Experts in authors' institutions reviewed and validated the content and construct validity of the instrument. The reliability was established by pilot testing the instrument using respondents from Wenchi Methodist Senior High School, an inclusive school in the Bono Region of Ghana. The Cronbach's coefficient alpha derived for the questionnaire was 0.79. The study used a cross-sectional descriptive survey design and a sample size of 136 teachers selected using the simple random sampling technique. Data were collected using the authors' self-developed questionnaire after pilot-testing for its refinement. Descriptive statistics (mean and standard deviation) were used to analyse the data. The findings revealed that most teachers had constraints using alternative assessment methods to evaluate learners who are visually impaired in the classroom due to their inadequate expertise. Overcrowded classrooms leading to large teacher-learner ratios, lack of assessment materials and logistics also posed formidable challenges to using alternative assessments. The study recommends the expansion of existing infrastructure and equipping teachers in inclusive schools with the requisite skills and competencies to use alternative assessment methods effectively. It is also imperative for the government and stakeholders to provide the required logistics to facilitate effective teaching, learning and assessment of learners with visual impairment in schools.

Keywords: Assessment, Ghana, inclusive school, teachers.

INTRODUCTION

Special education aims to narrow the gap between inability and ability so that educational achievement can be measured by examining the output of learners with disability who attend mainstream (Presley and D'andre, 2009; Presley, 2010; Stubbs, 2008). Guduzu *et al.* (2015), citing Goodwing (2007), indicated that assessment and inclusion are naturally connected, and equity in schooling relies on both. It is generally acknowledged that assessment directly influences teaching and learning and

that its power can be harnessed and directed toward positive outcomes (Guduzu *et al.*, 2015).

Assessment in education is concerned with a step-by-step approach to gathering information that is used for making decisions about learners and educational programmes. Assessment is the process of collecting information about learners and using the information to make decisions to improve their learning (National Council for Curriculum and Assessment [NACCA], 2019). It

includes a full range of tests such as interviews, observations, and quizzes. Learners with special educational needs including those who are visually impaired require instructional approaches that may differ from the traditional approaches hence creating the need for educationists to relook at the assessment procedures used in the classroom (Guduzu *et al.*, 2015). In Ghana, the 2007 Education Reform stressed reducing the use of traditional paper and pencil tests. It promoted critical thinking and problem-solving skills through alternative assessment methods (Acheampong *et al.*, 2007). Although the reforms were laudable, concerns were raised about how they could be implemented meaningfully in schools (Acheampong *et al.*, 2007). With the advent and implementation of inclusive education worldwide, the focus has shifted to using alternative assessment procedures such as authentic, performance-based, and portfolio assessments (Darling-Hammond, 2003; Ministry of Education [MoE], 2018).

In a broader sense, inclusive education requires ensuring access and learning for all students, especially those disadvantaged from linguistic, ethnic, gender, geographic or religious minorities, including economically impoverished backgrounds and learners with special educational needs (Asare *et al.*, 2019; MoE, 2015; UNICEF, 2017). According to the United Nations Education, Scientific and Cultural Organisation [UNESCO] (2009), inclusive education is an ongoing process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the learners and communities, eliminating all forms of discrimination (p. 3). Darling-Hammond and Adamson (2010) indicated that traditionally, an assessment was used to determine eligibility for special education services. Thus, emphasis was usually on formal assessment using standardised tests. As learners with special educational needs participate in small and large-scale assessments with the various participation methods, administrators must have specific knowledge of each type of assessment. As a result, educators are called upon to adopt flexible assessment options for learners with special educational needs through modification and alternative assessment strategies such as authentic assessment, performance assessment, and portfolio assessments (Darling-Hammond and Adamson, 2010). The move toward inclusive education requires novelty in assessment practices to promote the participation of all learners. As a result, teachers are called upon to adopt flexible assessment options for learners with special educational needs through modification and alternative assessment strategies such as authentic assessment, performance assessment, and portfolio assessments (Darling-Hammond and Adamson, 2010; Quansah *et al.*, 2019).

In Ghana, the Ministry of Education's strategic plan for 2010-2020 implemented the policy of integrating all

children with special educational needs into regular schools and placing those with severe disabilities in special education (MoE, 2015). Consequently, learners with mild to moderate conditions are placed in regular schools. Presently, senior high schools have also adopted integrating learners with visual impairment using the inclusion parameters. Sirugu Senior High, which is located in the Upper East Region, and Wa Senior High School in the Upper West Region, respectively, have been educating learners with visual impairment alongside their sighted peers, which is in line with the country's Inclusive Education Policy (2015) which is designed to ensure the achievement of quality learning outcomes for all learners through appropriate assessment and instruction among others. The situation has motivated parents to send their wards with disabilities to schools while providing inclusive education resources. Assessment officers from mainstream and special schools were trained to equip them with alternative assessment skills and competencies in selected districts to offer support to teachers and learners. Despite these efforts, much work is needed to ensure that learners with special educational needs are fully captured into the orbit of schooling in inclusive education, emphasising learners who are visually impaired (Casely-Hayford *et al.*, 2011; Kuyini and Boitumelo, 2011). It has been revealed that out of 288,868 school going-age individuals with visual impairment in the country only 65% have attended senior High School education while 40% have never attended had formal education (Ghana Statistical Services [GSS], 2014). This is a huge number and should not be taken for granted. Sirugu Senior High School is located in Sirugu in the Kasena Nankani West District of the Upper East Region. The school was established in 2000 as a regular school and started admitting learners with visual impairment in 2006. The school was granted an integration status in 2013. The current learner population stand at about 1,300 including 14 learners with visual impairment. Wa Senior High School which was established in 1970 is one of the senior high schools in the Upper West Region at Wa of Wa Municipality District. The learner population stand at about 1,900 including 10 learners with visual impairment.

Several studies have been conducted on education and support services for learners who are visually impaired in inclusive schools in Ghana (Adu, 2015; Agamboka and Dogbe, 2020; Owusu-Amoako, 2015). Despite these studies, none focused on teachers' challenges in using alternative assessment procedures for learners with visual impairment in inclusive senior high schools. According to Deku and Vanderpuye (2017), about 3,022 inclusive schools in Ghana implemented the Special Education (SPED) pilot scheme. These schools integrate learners who are visually impaired, intellectual, and physically disabled (Casely-Hayford *et al.*, 2011). However, Casely-Hayford *et al.* (2011) reported a significant number of teachers who were deficient in skills to assess learners'

learning in the classroom, as evidenced during the 2011 wave of the National Education Assessment Test for Proficiency in English and Mathematics. In another context, Noonan and McCormick (2014) noted how parents expressed dissatisfaction with the quality of assessment offered to their children in school. The current B.Ed. curriculum for teachers in Ghana provides much content and experiences for the training and equipping pre-service teachers to be effective with learners with special educational needs, including their assessment needs. However, until these pre-service teachers of the current curriculum are posted to schools to offer their service, serving teachers were trained based on previous teacher education curricula of the various teacher education institutions. A curious mind may ask how well these teachers were equipped with the required alternative assessment skills and competencies to manage learners with special educational needs in inclusive senior high schools. It is, therefore, against this backdrop that this study sought to explore the challenges teachers in inclusive senior high schools in northern Ghana face in using alternative assessment procedures to assess learners with visual impairment.

Many studies from different contexts reveal the negative effects of an overcrowded classroom on the quality of teaching, learning and education in general (Ananga and Tamanja, 2018; Blatchford and Russell, 2020; Blatchford *et al.*, 2009; Yelkperi *et al.*, 2012). Blatchford and Lai's (2010) study in the United Kingdom found that overcrowded classrooms could lead to passive learners. Overcrowded classrooms increase teachers' assessment burden, and individual assessment and feedback may be difficult. Moreover, alternative assessment procedures such as portfolios and observation appear to be strenuous for most teachers to manage and control while working in overcrowded classrooms (Chingos, 2013; Blatchford, 2020). In Ghana, several national and international policies have been initiated to increase school enrolment for all categories of learners (Ananga and Tamanja, 2018). These large class sizes have become a growing challenge to employ alternative assessment modes that accommodate the strengths and weaknesses of all learners in inclusive classrooms (MoE, 2018; Ananga and Tamanja, 2018).

Janish *et al.* (2007) identified a lack of materials as internal difficulties learners and teachers face in implementing alternative assessments. Similarly, the Ghana Education Service (2004) states that one of the challenges Ghanaian schools face with assessment in inclusive settings is inadequate logistics. To assess the learner comprehensively, there is a need for the availability and use of materials and assistive devices like mobility aids. Without assistive devices, learners with special educational needs cannot be assessed comprehensively (Gyimah *et al.*, 2018).

Many studies have concluded that non-availability of

time presents a challenge in practising alternative assessments in inclusive schools (Attia, 2020; Janish *et al.*, 2007; Sa'diyah, 2020; Sharma, 2015; Pavey *et al.*, 2002). Teachers required excessive time to effectively assess learners with special education needs using alternative assessment forms (Janish *et al.*, 2007). For instance, conducting interviews to help assess and diagnose the needs of a learner who is visually impaired takes much time. This becomes problematic when the learners are many and the teacher has other duties. Similarly, in the United Kingdom, Pavey *et al.* (2002) found time constraints as a major challenge to gaining the trust of learners with visual impairment to assess their mobility and independence needs which require alternative assessment procedures. Thus, teachers may have appropriate skills and knowledge to practice alternative assessments but do not adopt them because of time constraints given the number of learners they attend to.

Special education teachers must collaborate with regular education teachers, school administrators, parents, school psychologists, and other professionals to successfully educate all learners in the classroom. Janish *et al.* (2007) revealed a lack of parental support as one external constraint in implementing and using alternative assessment procedures in the classroom. They added that parents are hesitant to accept the use of alternative assessments for their children. The study also found teachers' lack of support from their co-workers in applying alternative assessments. This assertion is corroborated by Sen-nefer (2013), who found that teachers rated themselves as very poor regarding how they collaborate with other professionals. In Ghana, Gyimah *et al.* (2018) maintain that ignorance, poor parental attitudes, and illiteracy make it difficult to participate effectively with professionals in the assessment process.

It has been observed that there is a lack of training in inclusive education teaching and practices for regular school teachers, and most institutions are not offering enough course content to adequately train teachers (Mprah *et al.*, 2016). The implication is that most teachers may not be adequately trained to work in an inclusive environment. Many general education classroom teachers in Ghana do not have enough professional skills to effectively manage learners with special educational needs and disabilities in the inclusive classroom (Gyimah and Amoako, 2016). The authors further stated that teachers usually express concerns about adapting the regular school curriculum to suit the learning needs of learners with special educational needs and disabilities. Regular class teachers turn to use assessment practices that alienate learners with special needs (Gyimah and Amoako, 2016). The situation is not peculiar to Ghana. Elsewhere in South Africa, there are issues over implementing inclusive education, including a shortage of qualified teachers (Adewumi *et al.*, 2019).

Alternative assessment procedures seek to identify

individual learners' strengths, weaknesses, and conditions without regard to grade and age norms. As an alternative form of assessment, performance-based assessment is a procedure in which learners create their original responses to an assessment task in a classroom (Popham, 2005, cited in Wikstrom, 2007). In performance assessment, learners are given opportunities to exhibit what they know or are capable of doing. Gyimah *et al.* (2018) opine that it is frequently used in special education and includes observation and oral examinations. The performance assessment usually uses a scoring rubric, rating scale, or checklist against which the quality of learners' performance on a task is evaluated. This form of assessment cuts across subject areas and provides an opportunity for all learners, including children with special educational needs. Observation and interactions in the classroom are important features of performance assessment.

Authentic assessment is a performance assessment that occurs in a real-life situation. Learners determine the time and condition under which the behaviour is generated. Keyser and Howell (2008) state that authentic assessment mirrored real-life world tasks rather than the contrived learning experience of the classroom tests. Again, Zaim (2013) believes that authentic assessment is how a teacher evaluates learners' relevant and applicable knowledge in real-life experience. Authentic and performance assessments have been used interchangeably in the literature on education. However, some scholars continue to differentiate these concepts. For example, all authentic assessments require performance, but not all performance assessments are carried out in authentic-world situations (Palm, 2008, citing Meyer, 1992).

Lam (2018) opines that the idea of portfolios refers to a collection of purposeful and meaningful artefacts which characterise a person's efforts, professional growth and achievements. Some educationists argue for portfolio assessment as an alternative form of assessment because it shows the development over time and allows the learner to examine their work reflecting on the learning process (Lam, 2018). Thus, portfolio assessment stimulated zealous interests among teachers who advocate equity and diversity in education. Portfolio Assessment presents a clear alternative procedure to more forms of testing and presents a method by which learners' skills and accomplishments can be displayed (Wikstrom, 2007). Examples of portfolios may include poems, home works, and other work samples. An important characteristic of portfolio work is that it has to be updated to showcase the learner's achievement and growth. Consequently, this research aimed to identify teachers' challenges in using alternative assessment procedures to assess learners with visual impairment in inclusive senior high schools in Northern Ghana.

MATERIALS AND METHODS

The study adopted a descriptive cross-sectional survey design. The researchers purposively selected Sirugu Senior High and Wa Senior High Schools. The schools were chosen because they are the two main inclusive senior high schools in the northern part of Ghana educating learners with visual impairment. The population comprised 210 teachers from the two schools. A simple random sampling technique was used to select 136 respondents using Krejcie and Morgan's guidelines for sample size determination (see Krejcie and Morgan, 1970).

The researchers developed a Likert scale questionnaire which was reviewed and validated by experts in scale development from authors' institutions. The researchers identified the key issues relating to teachers' use of alternative assessment in inclusive schools and developed questionnaire to gather data for the study. The questionnaire was in two main sections. The first part dealt with respondents' demographic information, while the second part contained items that measured challenges in using alternative assessment methods. Teachers were required to indicate their degree of response to items on a Likert scale. To evaluate the teachers' challenges in using alternative assessment procedures to assess learners with visual impairment in Northern Ghana, respondents were given a four-point Likert scale questionnaire to respond to. The scoring was based on the four points Likert scale of measurement of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The options of the items were weighted in the Likert format with SA= 4, A = 3, D = 2 and SD = 1. The weights were equated to a maximum of 4 and a minimum of 1. To interpret the score a person obtains on the questionnaire, score bands were used. The instrument was pilot tested using twenty-five (25) non-participating teachers' responses from Wenchi Methodist Senior High School, an inclusive school in the Bono Region of Ghana. The Cronbach's coefficient alpha derived for the questionnaire was 0.79.

The three authors collected the data with the help of two teachers in the selected schools after all ethical protocols and considerations had been guaranteed and safeguarded. The data were analysed using descriptive statistics using SPSS version 25.

RESULTS

From Table 1, the respondents consisted of 4 resource teachers and 98 classroom teachers. Table 1 also revealed that the respondents comprised 77% male and 23% female school teachers. The information presented in Table 1 showed that 53% of the teacher had a teaching experience of fewer than 10 years, 31% had teaching

Table 1. Characteristics of teachers.

Category	Number	Percentage
Type		
Resource teacher	4	3
Classroom teacher	132	97
Gender		
Male	105	77
Female	31	23
Teaching experience		
1-10	72	53
11-20	44	31
21 above	23	16
Academic qualification		
Master's Degree	44	33
Bachelor's Degree	85	77
Diploma	0	0
Total	136	100

Source: Field Data, 2022.

Table 2. Challenges teachers faced in using alternative assessments of students with visual impairment in inclusive schools.

Challenges	Mean	SD
Overcrowded classroom	3.24	0.797
Lack of materials/logistics for effective assessment	3.21	0.809
Inadequate teacher expertise (skills and knowledge)	3.14	0.637
Lack of collaboration between stakeholders	3.06	0.849
Insufficient time for instruction and assessment	3.00	0.915
Poor learning environment	2.92	0.906
Learner absenteeism	2.91	0.849
Transfer of learners from one school to another	2.90	0.799
Total mean	3.05	

Source: Field Data, 2022.

experiences between 11-21 years, and 16% had taught above 21 years. Regarding teaching academic qualifications, 77% of the teachers had a bachelor's degree, and 33% possessed a second degree.

The results in Table 2 show teachers' challenges in inclusive classrooms using alternative assessment procedures for learners with visual impairment. Using the mean values obtained as indicators, the three most important challenges were overcrowded classrooms ($M = 3.24$; $SD = 0.797$), leading to high teacher-pupil ratios, the lack of materials and logistics for assessment ($M = 3.21$; $SD = 0.809$) and teachers' inadequate expertise ($M = 3.14$;

$SD = 0.637$) in alternative assessment procedures. Lack of collaboration among stakeholders ($M = 3.06$; $SD = 0.849$) responsible for educating learners with visual impairment in inclusive classrooms and the poor quality of learning environment ($M = 2.92$; $SD = 0.906$) prevailing in inclusive schools were also identified as challenges limiting teachers use of alternative assessment tools in inclusive senior high schools in Ghana. Learners' absenteeism ($M = 2.91$; $SD = 0.849$) from schools and their frequent transfers from one school to another ($M = 2.90$; $SD = 0.799$) also presented challenges to teachers in their bid to use alternative assessment procedures in inclusive schools.

DISCUSSION

The respondents admitted that their levels of expertise limited their ability to effectively utilise alternative assessment methods for learners with visual impairment in inclusive classrooms. The inadequate knowledge and expertise to effectively deploy alternative assessment forms to assess the learner who is visually impaired is a challenge to teachers. This may be the case because of the gaps between the quality of training and education of special educators and the practical challenges in classrooms. Given the limited number of assessed learners, many learners with special educational needs in the country may struggle to succeed with specialised programmes in schools (Guduzu et al., 2015) because teachers do not have the skills and knowledge to assess. Nenty *et al.* (2007) asserted that it is doubtful whether teachers are using these instruments to measure learners' overall performance because many teachers seem to lack the required training and skills. The finding also confirms a study conducted early on by Gyimah and Amoako (2016) on teachers' perceptions of procedures to assess learners with special educational needs and disabilities, indicating that in Ghana, most teachers have limited knowledge concerning the education of persons with special educational needs and therefore are unable to provide the needed support for this category of people. Until the introduction of the current B. Ed curriculum in Ghana, teachers were trained as generalists with little regard for their postings to special or inclusive schools. Hence, they deployed inappropriate instructional and assessment methods (Gyimah *et al.*, 2018). As stated earlier, these practices alienate learners with special educational needs (Gyimah and Amoako, 2016).

Moreover, the cumulating effects of financial constraints and inadequate teaching and learning resources make it difficult to provide the desired assessment forms to maximise support for learners with visual impairment. There were insufficient materials, including mobility aids, handheld magnifiers, and audiometers, to assess students' social, emotional, physical, and academic needs. According to Kuyini (2010), the lack of these aids and gadgets makes teachers exclude learners with special educational needs from the teaching, learning and assessment processes. The negative impact of limited financial resources and logistics on the assessment of learners is not peculiar to this study context and findings but an almost universal challenge (Hughes, 1996). Countless studies have concluded how inadequate financial and logistical constraints have impeded all facets of the educational process, including assessment (MoE, 2018; Bashir *et al.*, 2018; UNESCO, 2017).

The drive for children from all backgrounds to be in school has resulted in crowded and large class sizes, and their negative impact on the quality of teaching and assessment has been recognised (Ananga and Tamanja,

2018; Yelkpereri *et al.*, 2012; Khalid, 2019; Blatchford and Russell, 2020; Blatchford *et al.*, 2009). The high teacher-student ratio makes it difficult for teachers to attend to the individual needs of learners effectively. Large class sizes do not allow the teacher to fully attend to the individual assessment needs of learners based on the nature and severity of their impairment. More often than not, teachers teaching overcrowded and large class sizes tend to rely on traditional forms of paper and pen assessment at the expense of the more personalised such as a portfolio. The number of learners teachers must grapple with in classrooms requires more time at their disposal. However, teachers operate within a given contact and instructional hours, limiting the opportunities to effectively provide the desired individualised assessment for each learner. Spending more time on each child in the assessment process implies that a teacher has to teach fewer learners per class. This will enable the teacher to provide instruction and feedback on each child (Sharma, 2015; Attia, 2020).

The aggregate effects of overcrowding, teachers' expertise, and teaching resources feed into the quality of teaching and learning environments in inclusive schools. Where the environment is adverse for teaching, learning and opportunities to build social skills, students' impairment levels may even worsen, as evidenced by prior studies (Young, 2014; Agamboka and Dogbe, 2020; Hannah, 2013), which revealed that assessing learners with visual impairment in an unfriendly learning environment can even impair the learner more. The absence of teamwork among professionals at the assessment centres to enable inclusive schools to function effectively is a challenge identified in this and other prior studies (Amoako *et al.*, 2021; Attia and Asamoah, 2020; Philemon, 2016).

To be successful in inclusive education, there is a need to collaborate with parents and other professionals to enable inclusive schools to succeed. Lauriland (2013), cited in Adewumi *et al.* (2019), asserted that a great deal of collaboration should be the norm in a mainstream school. The author further stated that lack of collaboration makes it difficult to assess learners' needs and implement inclusive education successfully. This finding confirms an earlier study by Amoako *et al.* (2021). The study found that teachers had difficulties collaborating with other professionals and parents for effective inclusion.

Conclusions

The study found that teachers face many challenges in implementing alternative assessment procedures to assess learners with visual impairment in inclusive schools in northern Ghana. The inability to assess this category of learners pre-supposes that their educational needs are not fully met as required by national and international mandates and obligations. To mitigate the current

challenges, the researchers recommend that the government of Ghana offer opportunities through continuous professional development for teachers to update their skills, knowledge, and competencies in assessing learners with visual impairment in inclusive schools. This may be done alongside the conscious effort to train and deploy more qualified teachers and auxiliary staff to effectively manage learners with various degrees of visual impairment. Inclusive education should be provided with assessment tools, logistics, and resources to facilitate the work of teachers. The expansion and provision of new classrooms and other physical structures to accommodate the ever-increasing learners with visual impairment may also be required to alleviate the challenges teachers face.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

ACKNOWLEDGEMENT

We want to thank Mr Stephen Yakubu and Mr Enock Abubakar Salifu of Sirugu and Wa Senior High Schools, respectively, for their assistance during the data collection stage of this research.

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