

Mathematics Teachers' Use of National Assessment Feedback Reports in Improving Pedagogical Practices in Secondary Schools

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ABSTRACT

Despite its importance in contributing to economic development, the trend of Mathematics performance has been low. The National Examinations Council of Tanzania (NECTA) provides Mathematics assessment reports to the schools, highlighting students' strengths and weaknesses and recommending teachers to improve their teaching and learning practices. However, Mathematics performance in national examinations is still poor. This study examined how Mathematics teachers utilise Form Two National Assessment - Students' Item Response Analysis (FTNA-SIRA) feedback reports to enhance their teaching practices. Specifically, the study focused on teachers' perceptions and use of assessment feedback reports and their challenges. This qualitative study employed a phenomenology design that purposively selected 33 participants from ten (10) districts after obtaining their consent. The study used interviews and open-ended questionnaires to collect and analyse information using thematic analysis. Mathematics teachers admitted they hardly access feedback reports, and most of them revealed that they could not use them despite understanding their importance. Three Mathematics teachers from urban areas admit that using assessment feedback they accessed from the NECTA website improved their classroom teaching practices. However, underutilisation of the feedback is due to frailty in utilising online copies, reports remaining at the district or heads of schools' offices, and low motivation and skills in implementing the recommendations provided. Underutilisation of assessment feedback hardly informs any pedagogical improvement, which risks the continuation of poor Mathematics performance. The study recommends establishing strategies for teachers' effective use of assessment feedback for improving pedagogical practices, including capacity building, feedback use framework and motivation.

Keywords: Assessment feedback, mathematics performance, pedagogical practice, national assessment.

INTRODUCTION

Mathematics plays a central role in modern technological development due to its application in key areas, such as the current development of artificial intelligence, that are critical for economic development (Seah et al., 2021). Despite this importance, studies report low Mathematics performance in many countries around the world, such as the Philippines, Pakistan, Fiji, Ghana and Greece (Karakolidis et al., 2016; Khan et al., 2018; Guinocor et al., 2020; Peteros et al., 2020; Chand et al., 2021; Fokuo et al., 2022). It is noted that a continuation of poor performance in the subject jeopardises the advancement and use of technology in promoting economic development. Kuznetsova et al. (2021) and Lafuente-Lechuga (2020) show the crucial role of Mathematics in achieving sustainable development in societies. They argue that Mathematics plays a central role in solving problems related to daily life activities and enhancing understanding in business, industry, economics, social and humanitarian sectors, which are crucial for sustainable development. Few studies from Tanzania by Kihwele and Mkomwa (2023), Mazana et al. (2020), Ndume et al. (2020) have reported the prevalence of poor performance in Mathematics. Evidence from NECTA indicates that form four students' Mathematics results are lower than form two results. Table 1 indicates the trend of performance in five years.

Table 1: Mathematics Performance Trend of FTNA with Corresponding CSEE

Basic Mathematics (FTNA)				Basic Mathematics (CSEE)			
Year	Sat for Exam	% Passed	% Failed	Year	Sat for Exam	% Passed	%Failed
2020	600,751	15.94	84.06	2022	520,332	20.08	79.92
2019	570,591	21.09	78.91	2021	484,439	19.54	80.46
2018	503,761	22.95	77.05	2020	435,345	20.12	79.88
2017	485,494	32.00	68.00	2019	424,652	19.92	80.08
2016	408,191	21.55	78.45	2018	360,225	19.91	80.09

Source: NECTA

Several studies have reported various factors associated with poor performance in Mathematics. These factors include students' attitudes towards the subject. Most students perceive the subject as difficult (Kihwele & Mkomwa, 2023). Furthermore, teachers lack relevant, innovative pedagogical practices to assist students in learning and promote their interest towards the subject (Shoaib & Saeed, 2016). Teacher qualifications, low teaching motivation, and inadequate resources and materials hinder teachers' pedagogical creativity in enhancing students' learning. Chand et al. (2021) also report that ineffective design of the curriculum is one of the causes of poor performance. The implication is that the content seems to have limited applications and confirms its irrelevance to societal needs. The education authorities have responded to poor performance in several ways, including supporting teachers in implementing various initiatives, such as remedial classes for poor-performing students.

Consequently, teaching and learning resources have been provided and complemented with capacity-building programmes for subject teachers. Ndume et al. (2020) added that teachers implement their self-tailored innovations to improve performance using mobile learning in Mathematics. Kihwele and Mkomwa (2023) also mentioned the 'King and Queen of Mathematics' initiative as one of the strategies to raise the performance of Mathematics. However, these initiatives and innovations are fruitless as individual teachers implement them haphazardly. There are no proper guidelines from the policies; consequently, they are not systemically organised. As a result, poor performance of national examination results prevails despite the fact that assessment feedback is provided for improvement. NECTA sends assessment reports to the schools, highlighting observed challenges and recommending what teachers should do to improve teaching and learning. The purpose of these feedback reports is to minimise common learning mistakes and maximise learning achievement and

performance. Despite the feedback reports, the performance has not yet improved (See Table 1). The alarming trend has led the study to determine if teachers utilise the national assessment feedback during teaching to minimise common mistakes. The assessment reports in five consecutive years indicated that most reported factors for poor performance are similar (See Table 2). The observation implies that the reports do not reach the teachers, and those who receive them are not utilising them effectively.

Table 2: Factors for Poor Performance as Reported in SIRA

S/N	Core Factors for Weak Performance	2020	2019	2018	2017	2016
1	Inability to formulate the correct mathematical expressions and equations	Y	Y	Y		
2	Inability to recall and apply correct formulae rules, theorems, properties and concepts to solve problems in different topics	Y	Y	Y	Y	Y
3	Inability to perform metric unit conversion and proper manipulations	Y	Y			
4	Failure to interpret plane figures related to congruence and similarity, regular polygons and frequency distribution table when solving related problems	Y	Y			
5	Failure to perform units' conversion, make proper substitutions, sketch figures or diagrams and graphs and interpret information presented in diagrams and graphs	Y	Y	Y		
6	Lack of knowledge and skills in a specific topic	Y			Y	Y
7	Inability to use concepts/formulas/laws correctly, failure of the students to identify the demands of the questions				Y	
8	Lack of skills to comprehend word problems mathematically or diagrammatically			Y	Y	Y
9	Inability to identify the task of the questions		Y	Y	Y	Y

Source: NECTA

Despite the NECTA's efforts to provide assessment feedback reports to elevate Mathematics performance in schools, the poor performance trend in the subject continues. This study examined how teachers use FTNA-SIRA feedback reports to improve teaching practices. Form Two National Examination assessment feedback reports are ideal for this study due to their expected impacts in enhancing teaching and learning and preparing students for the Form Four National Examination. Therefore, the main objective of the current study is to examine the use of FTNA-SIRA feedback reports among Mathematics teachers for improving pedagogical practices in secondary schools. The study focused on the following specific aspects; -

- (i) To investigate how Mathematics teachers in secondary schools perceive national assessment feedback in improving teaching and learning.
- (ii) To explore how Mathematics teachers use national assessment feedback to improve pedagogical practices.
- (iii) To explore handicaps for Mathematics teachers' use of assessment feedback in improving pedagogical practices in secondary schools.

Theoretical Perspective

Feedback is a socially constructed process in which instructors establish and maintain the classroom setting (Handerson et al., 2019; Boud & Molloy, 2013). Dawson et al. (2019) argued that instructors are more likely to make decisions about their feedback processes based on their opinions rather than published evidences. Thurlings et al. (2013) proposes that the effectiveness of feedback processes is indispensable with the learning theory. The characteristics of effective feedback processes are related to specific learning theories which learners, either students or teachers, are facilitated. Each learning theory explains which mechanisms lead to particular learning outcomes. Learning theories comprise three basic components: inputs, means, and results (Driscoll, 2000). Therefore, the sociocultural perspective by Vygotsky (1978) provided the conceptual framework of the study. It has implications to both feedback providers and receivers on how they utilise feedback and perceived the expected outcome. Figure 1 shows the assessment feedback flow from NECTA to teachers and students,

aiming to improve classroom teaching and learning situations. The flow passes through various administrative offices and online platforms, specifically the NECTA website. Teachers, as the targeted receivers, have the role of reflecting on the feedback, their students' learning situation and pedagogical practices. From this reflection, teachers are expected to learn and adjust or innovate supportive pedagogical techniques that will impact students' learning and improve learning outcomes. The role of NECTA is to assess and provide feedback from the learning outcomes.

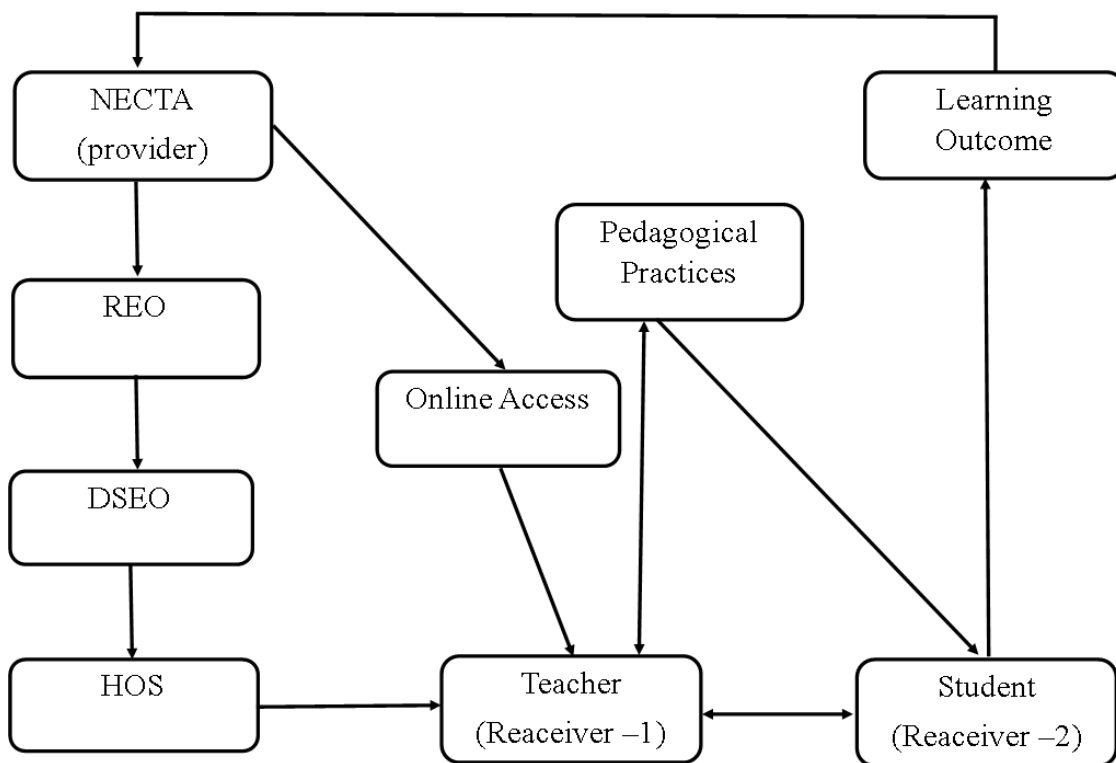


Figure 1: Assessment Feedback Flow Modified from socio-cultural Theory

In improving teachers' pedagogical practice through feedback, rescue dialogue between teachers and students is fundamental. In addition, Smith et al. (2016) conceptualised feedback dialogues as responsive pedagogy. The rescue dialogue entails the interchange between the learner's internal feedback and external feedback provided by the

teacher. Teachers' actions support students in proceeding through zones of proximal development. The situation indicates that feedback processes start with learners at a particular stage. When teachers receive feedback reports, they utilise the feedback to guide learners to the next phase (i.e., zone of proximal development) to realise the outcomes. From that perspective, after the teacher receives feedback from the authority, they should find a means to discuss the report of the previous assessment experiences. The discussion will help identify common mistakes and work on the recommendations by improving pedagogical practices to enhance learning outcomes.

Perceptions and Use of Assessment Feedback Reports

Learning effectiveness depends on the essential component, which is feedback. Assessment feedback refers to information a provider (assessor) gives concerning performance or understanding (Wisniewski et al., 2020). Feedback quality relies on clarity, accuracy, precision, selective, goal focus, and timeliness (Butler & McMunn, 2014). Assessment feedback is the response report provided after a national assessment from the assessing authority to teachers, students and the general public indicating students' strengths, weaknesses and recommendations for improvement for the particular assessed subject. Effective feedback affects significantly teachers' pedagogical practices and learners' performance. However, the assumption is that if a teacher is positive in terms of perceptions and belief, will eventually practice well. Therefore, to attain the benefits of effective feedback, teachers must have a positive perception of assessment feedback and practices. Lee (2008) insisted that Teachers' beliefs and values are key elements for influencing feedback practices. However, according to Brown and Harris (2009) believed that it is logical to consider teacher's conceptions and perceptions if you want to maintain consistency with the contextual demands in which the teacher operates. Adendorff (2007) added that feedback does not happen accidentally, teachers must learn

how to give and receive feedback effectively using specific techniques. Moss and Brookhart (2009) indicate teachers' two common misconceptions about feedback. The findings by Selvaraj et al. (2021) posit that teachers perceived feedback has a strong effect on students' academic performance, while on the other hand, feedback is a challenge for teachers to use in teaching and learning environments due to time constraints and teachers' inability to provide students with the feedback needed for self-improvement. Teachers view effective feedback as the return of graded or marked works and detailed corrections of assessed work. Dessie and Sewagegn (2019), regarding the influence of teachers' perceptions on feedback, showed no significant relationship between themselves and assessment feedback. However, teachers perceive feedback's power to improve students' learning as positive.

In contrast, Weaver (2006) states that feedback is expressed in oral or written form, and the nature of the information is ultimately shaped by tutors' values, beliefs, and understandings. The mismatch between teachers' perceptions and their practice of feedback emanates from a lack of appropriate awareness, knowledge, and skill about the purpose, nature, and content or forms of feedback in schools (Dessie & Sewagegn, 2019). The researchers further recommended intensive training to teachers about the nature of feedback to improve students' learning. Continuous monitoring and supervision are crucial to identify the gaps of feedback in actual teaching and learning processes. Lymo et al. (2022) explored secondary school teachers' practices in written English and found a positive belief about feedback in written lessons. Furthermore, there was a mismatch between teachers' perceptions and actual feedback practices, as controlling and judgmental feedback are mostly provided. The mismatch is influenced by inadequate training, many students, time shortages and errors teachers can hardly correct. The findings depict similar outcomes in

Mathematics subjects. The reviews on teachers' perceptions suggest that teachers have a positive conception of the role of assessment feedback in improving pedagogical practices and students' performance. However, it is noted that effective feedback practices need further interventions.

Challenges in Utilising Assessment Feedback Reports

The challenges teachers have been encountering in utilising national assessment feedback reports have not been covered widely in the literature on feedback utilisation. Various studies (e.g., Lema & Maro, 2018; Dessie & Sewagegn, 2019; Lymo et al., 2022) depicted that the common challenges for teachers to utilise assessment feedback include a lack of awareness, knowledge and skills about the purpose, nature, and content of feedback. Others include inadequate training, a large number of students in a classroom, limited school time and too many errors amongst students. However, Lema and Maro (2018) indicated that class size did not influence teachers' utilisation of feedback in teaching and learning Mathematics. Paris (2022) found that the biggest challenge in utilising effective feedback is how instructors manage affective responses and mindsets towards feedback. Teachers' perspective towards feedback determines how effective the process would be.

Kyaruzi et al. (2018) identified that Mathematics teachers' assessment challenges include the lack of assessment skills to implement effective school-based assessments (Osaki et al., 2004). These challenges may influence their conceptions and perceptions of their own teaching and assessment practices, including the quality of feedback practices. Malaba (2013) noted that teachers' comments constitute shallow feedback, which does not help improve students' performance. The comments provided to students are not constructive to improve their work. Jamshidian (2019) mentioned the common challenges in providing feedback to teachers on their educational performance,

including lack of motivation to improve performance, failure to consider factors affecting teacher's performance, inappropriate feedback provision, and lack of follow-up. Thus, as evident from the available literature, most studies have focused on teachers' feedback provision and practices at all levels of education, leaving aside how teachers perceive, access and practice assessment feedback reports from the national assessment authority. This paper, therefore, intends to bridge the literature gap by investigating how teachers perceive and use the standardised FTNA-SIRA assessment feedback reports to improve pedagogical practices and elevate students' performance in Mathematics subject.

Methodology

The study employed a phenomenology design to understand Mathematics teachers' lived experiences regarding accessing and using assessment feedback to improve their teaching practices. Brinkmann et al. (2014) assert that phenomenology is the study of lived experiences and reflection of life phenomena and their structure to gain a deeper understanding of their meaning. Therefore, the design was appropriate to study teachers' lived experiences using FTNA-SIRA feedback reports to enhance their pedagogical practices. The study involved thirty-three (33) participants from ten (10) selected districts of Tanzania Mainland. The districts were purposively selected due to their low performance in STEM subjects in FTNA for five consecutive years. The participants were purposively selected based on their leadership authority or access and use of the FTNA-SIRA feedback reports. The participants included four (4) District Secondary Education Officers (DSEO), seven (7) Heads of Schools and 22 Mathematics teachers for form two classes. The study drew on the ideas of Auerbach and Silverstein (2003), which emphasised obtaining respondents' consent and informing participants about study objectives as part of ethical consideration. The data collection process employed open-ended

questionnaires, telephone calls and in-depth interviews. The study conducted telephone calls to DSEO and face-to-face interviews with HOS to inquire about their involvement in receiving, distributing, and giving directives to teachers using the FTNA-SIRA reports. Consequently, Mathematics teachers filled in open-ended questionnaires with information related to access and use of FTNA-SIRA feedback reports. Content analysis was used to analyse the data, where coding methods, theme development, and interpretation of the results were employed (Saldana, 2013). The sense-making process from the collected data enabled researchers to understand how FTNA-SIRA feedback reports are accessed and used amongst Mathematics teachers to enhance pedagogical practices.

Findings

The study examined using FTNA-SIRA feedback reports amongst Mathematics teachers to improve secondary school pedagogical practices. The study found mixed perceptions among Mathematics teachers concerning access and use of FTNA-SIRA feedback reports. It was also noted that not all teachers accessing FTNA-SIRA reports used them for pedagogical improvements. Lastly, critical challenges undermine the use of FTNA-SIRA feedback reports to improve teachers' performance.

Perceptions on the use of FTNA-SIRA Assessment Reports

The study found a contradicting perception concerning the FTNA-SIRA feedback reports distribution channels. While the DSEO of the same district claims to have received and distributed the feedback reports to schools for use, teachers from the visited schools admitted to not having received the reports for the last two years. For example, when asked about the mechanism of ensuring feedback reports, DSEO-2 responded,

We collect assessment feedback reports from the REO office, then we distribute them to our head of schools to disburse to teachers as per subject specific requirements, especially to those teaching examination classes.

Contrary to this claim, teachers admit they hardly access these reports, which makes them believe they are not important to them. Teacher-18 revealed,

It has been almost two years, and we have not received the assessment feedback reports for forms two and four classes. Maybe they are unimportant to teachers.

Although, in other schools, HOSs admitted to receiving the feedback reports and distributing them to teachers for scrutiny and use, as HOS-1 say,

I collect one copy of the assessment feedback report of each subject for form two and form four from the district educational officer, and I distribute them to respective teachers. I insist them to use the reports to improve performance.

DSEOs believe that reports reach the schools through various means, such as printed copies or online links, and teachers use them, as DSEO-1 says,

Assessment feedback reports from 2015 to 2021 are available on the NECTA website, and they can access them there.

Teachers agree with DSEO that the reports are available online, but they do not have a means to access them, such as computers or internet connections. Teacher 2 claimed,

I have heard those report books are on the NECTA website, but as you know, I don't know how I can find them there, and we do not have access to the internet here in school.

These dilemmas make DSEOs believe teachers are reluctant to use online copies; as one said,

The problem is our teacher's hesitancy to use ICT devices to obtain teaching and learning-related materials.

In reality, teachers are inexperienced in using the reports due to a lack of training, ICT facilities, and internet in their working environment.

Researchers asked Mathematics teachers, HOS, and DSEOs to ascertain their perceptions of using FTNA-SIRA feedback reports to enhance teaching and learning. The findings show that teachers perceive FTNA-SIRA feedback reports positively and are believed to improve Mathematics teaching and learning practices. Mathematics teachers, for example, say that the feedback helps them to identify students' challenges in responding to examinations, implying that teachers adjust their assistance to students. Furthermore, teachers broaden their horizons in understanding various concepts differently from what they previously knew. Teacher 1 confirms these findings by saying,

The report book is useful when looking for better solutions for the past examination question items; it provides a teacher with a marking guide when students are solving such past papers.

Consequently, HOS-1 added,

I always insist and encourage them to use the reports to improve performance, as they share the same positive belief that the report has a pivotal role in enhancing teaching and learning to improve students' performance.

Mathematics teachers perceive that sharing the feedback reports with students promotes their curiosity in learning through studying what and how best candidates respond to examination questions. Some Mathematics teachers admitted sharing the feedback report copies with students to learn the best responses from candidates who performed well. Teacher 4 said,

When I receive feedback reports, I make copies and divide them to learners in groups where they discuss and present to the class what they observed in each question and where to improve for the forthcoming examinations.

Contrary to this perception, two Mathematics teachers reported they do not share the feedback report with students, fearing it will promote rote learning rather than develop meaningful learning. Teacher 11 cemented the finding as she said,

In daily classroom teaching, I do not and cannot share these feedback reports during teaching because it can take away their attention and concentrate on the sample of candidates correct and incorrect responses presented rather than what they are supposed to correct (Teacher-11).

However, the study found misconceptions about the rationale of NECTA's sharing of feedback reports among teachers. One teacher believed that students should rely on NECTA feedback as a source of learning rather than any other textbooks. For example, in her response to the questionnaire, she writes,

Through the feedback report, I assure my students about the accuracy in responding to examination questions as provided from NECTA reports, and they should not rely much on books produced by different individuals and organisations which contain some mistakes.

FTNA-SIRA Feedback Reports Use and Pedagogical Improvement

The findings reveal that five (5) Mathematics teachers out of twenty-two admitted to having access to FTNA-SIRA feedback reports in their respective schools, and they use them to enhance their pedagogical practices. Regarding the use, they reported two types of feedback reports used among teachers. The first use is reflecting on their pedagogical skills and making appropriate adjustments. The second is sharing the reports with students to learn how to respond to examinations. The two approaches constitute improving pedagogical practices that enhance students' performance.

Reflecting Pedagogical Practices

Three Mathematics teachers out of five who reported using the feedback reports said they use the report to enhance their teaching skills and practices. The reports help identify challenging topics most students fail in and plan for appropriate support, such as changing instructional strategies and supplementing learning resources. Teacher 22 confirmed these findings:

From the report, I obtain topics in which students perform poorly and put much emphasis on such topics during teaching. This is done by giving them more practical examples relating to stated topics.

Another response indicated that feedback reports help them understand most students' mistakes in responding to questions. Teacher 13, in her response, revealed,

Assessment reports help me identify common mistakes students make when talking about specific questions, and I share them with them during classroom discussions to avoid such mistakes.

Teachers admitted to learning how to construct examination questions and how best students can respond. The feedback enhances teachers' abilities to assess learners and provide appropriate guidance in teaching and learning processes. Teachers admitted to using self-reflection to improve classroom teaching.

Sharing with Students to Improve their Examination-responding Skills

Teachers admitted they produced copies of the sections where reports indicated the best and weakest responses to examination questions. Teachers believe that sharing feedback helps students understand how to respond to examinations in a better way. Teacher-4 confirmed these findings by saying:

I make copies and divide them among learners into groups.

Also, Teacher-13 confirms similar findings, adding,

I share with them [students] so they avoid committing the same mistakes.

These teachers' voices indicate the efforts to share and utilize the feedback from the assessment reports, cementing their beliefs that students will improve their learning through understanding the weaknesses of their predecessors. In a similar situation, teachers guide students to read the feedback reports kept in the school library. Teachers say that students can study and find their mistakes in

responding to examinations. Unfortunately, the teachers did not follow up to confirm whether students read or learned how to respond to questions. Teacher-16 confirmed the findings by saying:

I advise each student to read that report from the school library.

Although findings reveal the emphasis placed to students to use reports for learning, it is only for a few whose their teachers have access to the reports and shares them.

Feedback Reports Custodianship

DSEO and HOS admitted encouraging teachers to use feedback reports to enhance teaching and learning. The study found that, from NECTA, the reports are channelled to REOs, then to DSEOs, who will distribute them to schools. After the feedback reports had reached the schools, they used different custodianship models to promote the use of reports among teachers and students. In one school, HOS admitted that after receiving the reports, he distributed them to subject teachers for further use. DSEO 2 admitted,

After receiving the reports, I distribute them to subject teachers through their departments. However, the use depends on specific subject teacher to improve the performance.

In other schools, they keep reports in the library, where teachers and students can read them at their convenience. For example, HOS 2 acknowledged,

We obtain few report books for each subject from the district headquarters. These report books are available in the school library for teachers and students to utilise.

Teacher-16 from a different school presented the same observation that the reports are available in the school library. But they are not sure whether students read them to understand what they should improve.

Impediments in using FTNA-SIRA Feedback Reports

The majority of teachers, seventeen (17) out of twenty-two (22) Mathematics teachers, admitted they have never received or seen the

FTNA-SIRA feedback reports in their schools. The situation indicates a challenge on the distribution channel from NECTA to schools where, at some level, the responsible offices do not give the reports their due importance. Teacher 2 confessed,

I have heard that the report books are accessible on the NECTA website. However, the school cannot manage to access these reports in the website.

In some schools, teachers admit they receive few copies, and in some subjects, they do not receive them at all. Teachers acknowledge they understand the importance of these feedback reports, but they are inadequate. Due to its inadequacy, only a few teachers teaching form two and form four (examination classes) are given, despite their importance to all teachers across school classes. DSEO-1 confesses,

Sometimes the copies of reports received in the district are insufficient for our schools.

HOS-6 echoes the claim:

We obtain a few copies of reports per each subject from the district headquarters.

Another Mathematics teacher confirms the inadequacy of these reports, saying,

For our school, the supplied number of report books is limited to teachers only. Also, some subject report books are not distributed to all.

Another impediment found by the schools is that these feedback reports arrive late. According to teachers, the delay of the reports affects the teaching methods and strategies to assist students' learning. HOS-1 presents this claim:

The reports may also be availed to the school by the end of next term, which we cannot use for learning improvement.

DSEO 4 also reported the finding on the process that resulted in the late distribution of the reports as he said,

The report books take longer to reach our district offices, which makes it difficult to distribute them to schools timely. Sometimes, most of the reports remain in the stores at the district level. For instance, in the past two years, we received the reports in the second term when form two and form four had seats for mock examinations (DSEO-4).

Despite receiving a few copies a long time after the reports were released, two (2) teachers out of 22 admitted that they had no idea how to use the reports properly to improve teaching practices. HOS-10 reports,

Teachers are sometimes unaware of what to do with the feedback report books. They can take them from my office after a week, you can find them abandoned in the staff room.

Since teachers lack the necessary skills to use the feedback reports for teaching improvement, they do not take care of them or access replacements on the NECTA website.

Discussion

The study examined using FTNA-SIRA feedback reports amongst Mathematics teachers to improve pedagogical practices in secondary schools. The findings above indicate that the distribution channels of assessment feedback reports are problematic and lack accountability, resulting in inaccessibility, late distribution and inadequate copies in schools. In a few cases, assessment reports reach the schools late, and teachers lack relevant competencies for effective utilisation, which inform their pedagogical practices. The process contradicts Adarkwah (2021), who reported that effective feedback should be provided and used consistently and on time. The findings imply that many teachers cannot access and use the reports, which renders their distribution futile, requiring immediate intervention for teachers to access online copies to meet the NECTA's purpose of sharing such feedback. Nevertheless, few schools whose teachers have an ICT passion can access the report books in soft copy from the NECTA website. The findings are consistent with Jamshidian (2019), who postulated that

inappropriate feedback provision to teachers limits their pedagogical practices that affect students' learning achievements. A mechanism to capacitate and facilitate teachers to access feedback report from NECTA website is vital to enhance its timely access and utilization in improving teaching and learning. Teachers positively perceive that using FTNA-SIRA feedback reports can improve Mathematics teaching and learning practices and enhance students' learning outcomes. Mathematics teachers perceived that the feedback helps them to identify students' challenges in responding to examinations, implying that teachers adjust their assistance to students. On the other hand, teachers broaden their horizons in understanding various concepts differently from what they previously knew. The findings provide evidence that the use of assessment feedback has a critical contribution to elevating teachers' pedagogical competencies.

These findings are concurrent with Selvaraj et al. (2021), who stated that teachers perceived feedback has a strong effect on students' academic performance, while on the other hand, feedback is a challenge for teachers to use in teaching and the learning environment due to time constraints and teachers' inability to provide students with feedback they need for self-improvement. Dessie and Sewagegn (2019) showed no significant relationship exist between their perception of the practice and their assessment feedback. However, as Adarkwah (2021) reports, it is noted that teachers highly perceive the power of feedback to improve students' learning. Teachers have varying beliefs on using feedback reports in the sense that the reports help students develop curiosity and promote rote learning. Furthermore, they replace other resources such as textbooks. Conversely, few teachers perceive sharing feedback with learners might harm learning efficacy. The perception indicates teachers have limited innovative skills in interpreting the feedback and impacting teaching techniques. Awareness creation should be over-emphasized to allow more teachers to use assessment

feedback for self-reflection and improvement and promote students' learning and achievement. Although most teachers do not have access to FTNA-SIRA feedback reports, those with access have indicated the critical advantage of the feedback reports, such as identifying students' mistakes, challenging topics, and how to respond correctly to some questions. For those who access feedback reports, the outcome of using them has been teachers' adjustment of their teaching techniques, styles, and methods to strengthen students' concepts on specified topics and promote better approaches to responding to questions. In tandem with these findings, Lyimo et al. (2022) identified that teachers had a positive belief about feedback, but there was a mismatch between what the teachers perceived to do and their actual feedback practice. Inadequate training, many students, time shortage and written errors for teachers to correct influenced the mismatches. Education authorities and stakeholders should provide a clear framework for teacher training to capacitate their awareness and abilities to utilize the reports for improved teaching and learning.

Unfortunately, those who had no access to the feedback reports were unaware of the recommendations of the assessment reports and did not have any clear framework for using those results to make programmatic changes to improve students learning. The findings show a necessity of providing them with capacity-building training, as Ramollo and Kanjee (2023) assert that competence in using assessment feedback is a prerequisite for teachers. Inaccessibility to feedback reports implies teachers lack self-reflection, which denies them opportunities to evaluate their pedagogical practices and look for alternatives that promote student learning. Ultimately, the status of FTNA-SIRA feedback reports use hardly inform any pedagogical improvement, resulting in poor student performance in national examinations. It is noted that various factors impede the effective utilisation of the FTNA-SIRA feedback reports in schools. The factors

include lack of capacity-building training, insufficient copies of reports, late distribution, inadequate access to online assessment reports due to limited ICT facilities, and the budget for internet facilities. There is no clear framework for using the reports in the classroom, as each teacher uses them differently. Although NECTA plays its role in preparing the reports promptly, the accountability of REO, DSEO and HSOs for distributing and supervising their use is still questionable. In this context, teachers prove their innocence as they hardly access the reports and lack guidance, proper framework, capacity building, and motivation to utilise them. These findings are in line with the results by Lema and Maro (2018), Dessie and Sewagegn (2019) and Lymo et al. (2022), which depicted that the most common challenges for teachers to utilise assessment feedback include lack of appropriate awareness, knowledge, and skill about the purpose, nature, and content or forms of feedback in schools, inadequate training, large number of students in a classroom, limited school time and too much errors among students. NECTA in-line with PoRALG should prioritise teachers motivation, administrators accountability and professional development programs focusing on effective use of assessment feedback reports, equipping teachers with strategies to analyse and apply feedback reports for continuous improvement of teaching practices.

Conclusions and Recommendations

The study examined using FTNA-SIRA feedback reports among Mathematics teachers to improve secondary school pedagogical practices and enhance students' academic achievement. Despite challenges in accessing assessment feedback reports from the findings, teachers positively perceive these reports as a catalyst for adjusting their teaching practices. Teachers had different approaches to using these reports. The findings imply that teachers require a reliable mechanism of timely accessing the reports and capacity-building support for optimal utilisation of these assessment feedback reports. Study findings further imply that Mathematics teachers can effectively

utilise FTNA-SIRA feedback reports to improve their pedagogical practices if they receive proper supervision and relevant support. The study recommends establishing a coordinated and accountable channel for distribution, monitoring, and providing teachers capacity-building support and strategies for effective use of assessment feedback to improve pedagogical practices. However, Mathematics teachers should be motivated to interpret and implement recommendations from the assessment reports through their school-based community of learning.

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