Supporting Teachers toward Preparation and Use of Gender-Responsive Teaching and Learning Materials: The Influence of School Leadership and Management in Pre and Primary Education in Lindi Region.

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ABSTRACT

This study aimed to investigate the role of school leadership and management in supporting teachers in the preparation and use of gender-responsive teaching and learning materials in pre-primary schools. The study was conducted in four districts of the Lindi region, Tanzania, with a study population of 24,700 education stakeholders. A sample size of 1059 respondents, including 344 teachers, 49 head teachers, 196 school committee members, 392 pupils, 24 District School Quality Assurance Officers, 49 Ward Education officers, and 4 District Pre and Primary Education Officers, was selected for the study through purposive, simple random, and quota sampling techniques. The study employed a convergent research design within the framework of a mixed research approach in which data were collected by using questionnaires, interviews, focus group discussions, observations, and documentary review methods. The findings revealed that school leadership and management play a significant role in supporting teachers toward the preparation of gender-responsive schemes of work and lesson plans; significantly support teachers in preparing gender-responsive teaching and learning aids; and significantly support teachers towards preparation of gender-responsive lesson notes. Based on the findings, the study recommends the adoption of a more structured approach to integrating gender-responsive pedagogical practices in teaching and learning; making gender-responsive material preparation a mandatory component of teacher training and supervision frameworks; ensuring ongoing professional development for teachers; ensuring sufficient instructional resources and clear guidelines on implementing gender-responsive teaching.

Keywords: *School leadership; school management; gender-responsive*

INTRODUCTION

Throughout the decades, education has widely been acknowledged as a fundamental human right and a critical tool for achieving gender equality and sustainable development (Kamala & Kamalakar, 2024; Leal Filho, Kovaleva, Tsani, Țîrcă, Shiel, Dinis, & Tripathi, 2022). However, disparity in access to quality education has been a challenge towards mainstreaming gender equity in education and societies (Mihaila & Lousada, 2024). The use of gender-responsive teaching and learning materials in classroom instructions has been proven to foster inclusive learning outcomes, particularly by promoting equitable learners' participation (Rarieya, Wango, Oluga & Abunga, 2024). Gender-responsive instructional materials take into account the different learning needs and experiences of both boys and girls, ensuring that all learners feel valued and supported (Canuto & Espique, 2023). However, evidence from empirical studies suggests that the development and integration of gender-responsive teaching and materials remain limited in many schools across various developing countries, including Tanzania (Mhewa, Bhalalusesa & Kafanabo, 2020; Rarieya, Wango, Oluga & Abunga, 2024).

The role of school leadership and management is critical in fostering an inclusive and equitable educational environment (Canuto & Espique, 2023). Effective school leaders not only oversee administrative functions but also shape the culture and practices within the schools (Bush, 2020). They influence the adoption of innovative teaching practices and provide support to teachers to enhance their pedagogical approaches (Riddel & Zulfikar, 2024; Sliwka, Klopsch, Beigel & Tung, 2024). In this case, gender-responsive school leadership plays a significant impact in supporting teachers to design and use gender-responsive teaching and learning materials by promoting professional development, fostering collaboration, and ensuring accountability (Riddel & Zulfikar, 2024).

In line with its critical role in fostering inclusive and equitable learning outcomes, various efforts and targeted policies have been adopted to enhance effective preparation and use of gender-responsive materials through leveraging gender-responsive school leadership (Laursen & Austin, 2020; Buabeng & Amo-Darko, 2024). At a global level, UNESCO's Gender Equality Action Plan in Education (GEAP) emphasized the importance of trained school leaders in assessing classroom practices and teaching materials to identify and address gender biases (García-Holgado & García-Peñalvo, 2022). Similarly, the Global Partnership in Education (GPE) provides funding and technical assistance to train school leaders to promote gender-responsive practices, including resource development (Duma, 2022).

As one of the regional initiatives in developing countries of Africa, the Forum for African Women Educationalists (FAWE) supports training programs to school leaders on gender-responsive pedagogy, including the development and selection of instructional materials that challenge gender stereotypes (Mafuleka, 2023; Abraha, Seifu & Dagnew, 2023). Notably, gender-sensitive school leaders are likely to ensure the creation of a gender-sensitive learning environment (UNESCO, 2018). In Ghana for instance, school leaders have been trained to support their teachers to become gender-responsive in the preparation of instructional materials (Gender Equality in Education Snapshot-GES, 2018). This is in line with the fact that, teachers' ability to respond to gender issues depends on the effective policies and assistance that school leaders and managers provide to them (DeMatthews, Carrola, Reyes, & Knight, 2021).

In East Africa, countries like Kenya, Uganda, Tanzania and Rwanda have been collaborating with FAWE to create a gender-responsive pedagogy toolbox for primary school teachers, which aims to promote gender-sensitive teaching and learning environments (Krišová & Polánková, 2020; Banerjee, 2024). Through FAWE's interventions, school leaders have been trained on gender-responsive school leadership in which their key role is to foster gender responsive school teaching and learning environments (Ananga, 2021). Accordingly, school leaders who participated in FAWE trainings have improved their gender equity practices and fostered inclusive school learning environments including supportive culture toward development and use of gender-responsive instructional materials (Mafuleka, 2023).

In Tanzania, the Education and Training Policy of 2014 version 2023 identifies the potential role of gender-responsive pedagogy as one of the most effective strategies for ensuring gender equity within the education systems (MoEVT, 2014; MoEST, 2018; Mhewa et al., 2020). In addition, several initiatives and interventions have been undertaken both by the government and Non-Governmental Organizations (NGOs) aimed at enhancing the preparation and effective use of gender-responsive teaching and learning materials (Ananga, 2021; Krišová & Polánková, 2020). Prominent interventions include training programs on gender-responsive pedagogy for primary school teachers and teacher college tutors, the development of a gender-responsive pedagogy toolkit, and a gender-sensitive classroom simulation project (Mafuleka, 2023; Lopez & Andal, 2024).

Despite the adopted interventions, empirical evidence from various studies shows that challenges associated with the development and use of gender-responsive teaching and learning materials in pre-primary and primary schools in Tanzania persist (Losioki & Mdee, 2023; Mhewa et al., 2020; Rarieya, Wango & Biswalo, 2025; Muasya, 2021; Vilches, 2022). Notably. A study by Vilches (2022) observed that the use of non-gender-responsive teaching and learning materials encourages a hidden curriculum that facilitates unequitable representation of females and males. Similarly, empirical evidence reveals that many teaching and learning materials in primary schools contain stereotypical representations of girls and boys (Losioki & Mdee, 2023; Nkya & Kibona, 2024).

In recent years, the Aga Khan Development Network (AKDN), through its Foundation for Learning (F4L) project, has introduced a number of interventions in the four selected councils of Lindi region aimed at addressing gender inequality in education. Among the adopted interventions are the promotion of gender responsive school leadership intended to foster the adoption of gender responsive pedagogy among teachers (AKU, 2020). Through this intervention, Head teachers were trained on effective school leadership to enhance gender-responsive school leadership practices (AKU, 2020). Notably, effective school leadership was believed to be significant for the creation of a gender-sensitive school environment that can support teachers toward effective preparation and use of gender-responsive teaching and learning materials (Lopez & Andal, 2024; Vilches, 2022).

Nevertheless, despite the adopted efforts by the F4L project, limited empirical evidence is available regarding the actual impact of the interventions on strengthen gender responsive pedagogy through leveraging gender responsive school leadership practices in the context of pre and primary schools in Lindi region. This lack of rigorous, context-specific research constrains stakeholders' initiatives to assess the effectiveness of the adopted interventions, draw lessons learnt, and inform future practices. As a result, the potential for scaling up such initiatives across other districts remains uncertain and inadequately supported by evidence. This study was therefore necessary to bridge the knowledge gap by providing empirical evidence on the role of school leadership and management in enhancing the preparation of gender-responsive teaching and learning materials in pre and primary education in Lindi region. Specifically, the study sought to:

- Examine the role of school leadership and management in supporting teachers toward preparation of gender responsive schemes of work and lesson plans;

- Assess the extent to which the school leadership and management support teachers in preparing gender responsive teaching and learning aids; and

- Evaluate the role of school leadership and management in supporting teachers toward preparation of gender responsive lesson notes.

METHODOLOGY

Research Approach and Design

This study adopted a mixed research approach under the philosophical framework of pragmatism in which a convergent research design was employed to guide the data collection and analysis process. The mixed methodology was a suitable approach in this study because it allowed the use of both quantitative and qualitative methods as a means to offset the weaknesses inherent within one approach with the strengths of the other (Creswell & Creswell, 2018; Halcomb & Hickman, 2015). In addition, the use of convergent design was justified on the grounds that it allowed the study to capitalize on the strengths of both quantitative and qualitative methods while mitigating their respective weaknesses (Creswell & Creswell, 2018). Through this design, the researchers collected both quantitative and qualitative data simultaneously, analyzed them separately, and integrated the overall results to get a comprehensive understanding of the research problem (Creswell, 2014; Halcomb & Hickman, 2015).

Population and Sampling

The target population for this study was 24,700 individuals, comprised of 20,207 pupils, 2,499 teachers, 372 Headteachers, 1,488 School SCMs, 105 WEOs, 4 DPPEOs, and 24 DSQAOs from four selected councils of Lindi region, namely Lindi Municipal Council, Ruangwa, Mtama, and Nachingwea District Councils. Thus, by using Yamane's formula, an estimated sample size of 1059 primary respondents was drawn for the study as given by the formula below:

$$n = \frac{N}{1 + N(e)^2}$$

Whereby;

n = proportional sample size

N= Targeted Population

e = Level of Precision. The level of precision is presented by a 95% confidence level (0.05).

To determine a reasonable sample for the study, four main types of sampling techniques were used, namely: stratified random sampling, simple random sampling, purposive sampling, and quota sampling techniques.

Stratified random sampling

Stratified random sampling was used to select 49 public primary schools from which the study sample of respondents was drawn. Through this technique, 11 schools from Lindi MC, 12 schools from Ruangwa DC, 15 schools from Nachingwea DC, and 11 schools from Mtama DC were selected for the study at a proportional rate of 0.13 (49/372) based on their sampling frames.

Purposive sampling

Purposive sampling was used to obtain the head teachers from the sampled schools, WEOs, DPPEOs, and SQAOs who were selected based on the virtue of their positions. The use of this technique enabled the researchers to identify the information-rich participants to gain deeper insights into how school leadership and management enhance gender-responsive pedagogy (Cohen, 2011).

Simple random sampling

This technique was used to obtain pre-primary and primary teachers who were randomly selected through a simple rotary method. The use of this method provided an equal chance for every participant to be selected. The sample was therefore representative of the population (Saunders, Lewis & Thornhill, 2019).

Quota sampling

Quota sampling was used to obtain the school committee members who were selected based on their non-teacher membership characteristics. Through this technique, the study drawn a sample of non-teacher members of the school committee that represented the community. Table 3.1 presents the composition of the study sample and sampling techniques used to obtain the sample subjects for each category.

Table 2. 1

Population, sample size, methods of data collection, and sampling techniques

SN	Category of Respondents	Population Estimate	Sample Size	Method of Data Collection	Sampling Technique
i	DPPEOs	4	4	Interview	Purposive
ii	WEOs	105	49	Interview	Purposive
iii	DSQAs	24	24	Focus Group Discussion	Purposive
iv	Headteachers	372	49	Interview	Purposive
v	Pre-& Primary Teachers	2,499	345	Questionnaire	Simple Random

vi	Pre-& Primary Pupils	20,207	392	Focus Group Discussion	Simple Random
vii	School Committee Members (Non-Teaching Category)	1,488	196	Questionnaire	Quota Sampling
	Total	**24,700**	**1059**		

Source: Field Data (2024)

Reliability and Validity of the Instruments

The quality of the research data was ensured by considering both reliability and validity of data collection instruments.

Reliability

In this study, reliability was ensured and tested for internal consistency as determined by both Cronbach's alpha and inter-rater reliability. Cronbach's alpha was used to measure the consistency of the responses provided by the subjects to all the items in the instrument. On the other hand, the inter-rater reliability was used to ensure that all participants were given the same and relevant items from various groups and types of research instruments. Through the use of inter-rater reliability, different members of the research team were involved in collecting data from a sample group through various data collection methods and comparing their results. (McDonald, Schoenebeck, & Forte, 2019). The inter-rater method helped the study to avoid influencing factors related to personal bias, mood, human error, and external factors that might create variation in the results (Gwet, 2014).

Validity

In this study, researchers ensured both construct and content validity by clearly defining the study variables based on strongly validated literature. Furthermore, face validity was enhanced through a pilot study, which was conducted at Bagamoyo District. The sample size for the pilot study comprised 10% of the overall sample categories involved in the study (Lewis, Bromley, Sutton, McCray, Myers & Lancaster, 2021). Thus, the pilot study involved a sample size of 120 participants, including 5 WEOs, 5 HTs, 35 teachers, 15 SCMs, and 60 pupils from 5 primary schools in Bagamoyo district. Moreover, the instruments were shared with various research experts from ADEM and AKU whose recommendations were used to enhance the quality of the tools. Through this technique some of the items were dropped, some were improved and new items were added.

Data Collection Instruments

The research data were collected by using questionnaire, interview, documentary review, Focus Group Discussion and observation techniques. The use of multiple methods was adopted in order to overcome the limitations of one method with the strengths of the other (Creswell, 2014). Notably, triangulation process in the data collection ensured validity and enabled the researcher to get the reality of what was investigated (Creswell, 2014; Clark & Clark, 2022).

Data Analysis Techniques

Data analysis was categorised into two main types based on the nature of the collected data namely quantitative and qualitative data analysis techniques. The quantitative data were analysed by using descriptive analysis techniques in terms of mean, standard deviation, and skewness. On the other hand, qualitative data were analysed through content analysis in terms of emerged themes and verbatim quotes.

RESULTS AND DISCUSSION OF FINDINGS

This section presents the results and discussion of the findings related to the role of school leadership and management in supporting the preparation of gender-responsive teaching and learning materials. The results and findings are presented as per the specific objectives of the study.

Preparation of Gender Responsive Schemes of Work and Lesson Plans

The descriptive results show that teachers reported a mean of 3.92, while SCMs reported a relatively higher mean of 4.14, indicating general agreement that the school leadership is supportive, with SCMs viewing this support more positively. The standard deviations (SD = 1.157 for teachers and SD = 1.017 for SCMs) suggest some variability in responses, while the negative skewness values for both groups indicate a tendency toward higher ratings of leadership support. On the other hand, the independent samples t-test results showed that SCMs' scores were significantly higher than those of teachers, $t(343) = -2.15$, $p < .05$. This indicates that SCMs perceive school leadership and management as more supportive than the actual experiences of teachers. These findings provide insight into a perception gap that may require more consistent supervisory support from the school leadership and management.

The qualitative findings from interviews with Head Teachers, WEOs, and DPPEOs provide insights into the school leadership and management as being supportive to teachers, in which four themes were observed, namely: leadership encouragement and motivation; promotion of gender equity in instructional planning; accountability in preparation of teaching and learning documents; and leadership commitment to inclusive school culture. When responding to the given question during an interview, one Head Teacher was quoted as saying that;

"…I normally ensure that the prepared schemes of work and lesson plans consider equal learning opportunities for both boys and girls… Also, I ensure the creation of awareness among teachers during MEWAKA at school levels…" (Headteacher C7, June 2024).

The above quote emphasizes the Head Teacher's commitment to promoting gender equality by ensuring that lesson plans and schemes of work provide equal learning opportunities for both boys and girls**.** Additionally, it highlights the role of Head Teachers' awareness and professional development through MEWAKA sessions in fostering gender-responsive teaching practices.

A similar comment, emphasizing the role of school leadership and management in enhancing the preparation of gender-responsive schemes of work and lesson plans, was given by the other Head Teacher, arguing that:

"…I speak to each teacher to ensure the lessons he or she prepares are gender-responsive. Also, I make follow-up to ensure that the content prepared is gender-responsive…" (Head Teacher A10, June 2024).

The quote by the Head Teacher implies that there is equal consideration of both girls and boys in the preparation of lesson plans and schemes of work.

Likewise, the documentary review provided insights that are aligned with the previous findings in which the observed lesson plans were confirmed to be gender-responsive, as shown in Figure 3.1.

Figure 3.1: Sample of Lesson Plan

Source: Field Data.

Figure 3.1 shows an example of a lesson plan that reflects the categorization of pupils based on their gender. This implies that teachers are gender sensitive in the preparation of lesson plans, which is essential for promoting an inclusive learning outcome. This approach helps to address gender biases by ensuring equal participation, which supports the diverse needs of all students. Moreover, the qualitative findings provided the same insights in which the DSQAOs affirmed that, the schemes of work and lesson plans prepared by teachers are gender-responsive. During the FGD session, one of the DSQAOs recommended that:

"…teachers mainly prepare schemes of work and lesson plans that consider the integration of equal learning opportunities for both girls…" (DSQAO FGD, June 2024).

The above quote reflects the proactive school leadership role of creating a positive and inclusive school environment that supports teachers in ensuring effective preparation of gender-responsive schemes of work and lesson plans.

The high mean scores for both teachers and SCMs, coupled with negative skewness, suggest strong agreement that school leaders provide direction, encouragement, and monitoring in ensuring gender responsiveness in planning documents. These findings align with various literature emphasizing the importance of leadership in setting expectations for inclusive and equitable instructional practices, see for example (Leithwood, 2021; Flores & Bagwell, 2021).

The slightly higher mean reported by SCMs indicates that school leaders perceive themselves as more actively supporting teachers than teachers perceive the support they receive. This is consistent with Daniëls, Hondeghem, and Heystek (2020), who observed that administrative staff often overestimate the level of support provided compared to teachers' lived experiences. The observed variability in standard deviations suggests inconsistencies in how the school leadership support is implemented across schools in the sense that some teachers may receive strong mentorship while others do not.

Furthermore, the t-test results revealed a statistically significant difference between the two groups, $t(343) = -2.15$, $p < .05$, indicating that SCMs reported significantly higher perceptions of leadership support than teachers. This aligns with their respective mean scores, where SCMs (M = 4.11) rated leadership support more favorably compared to teachers (M = 3.84). These findings align with empirical evidence from previous studies such as Bryant and Walker (2024) and Mullen and Badger (2023). Notably, it was generally observed that middle-level school leaders often rate leadership support more favorably because they are more directly involved in administrative initiatives. On the other hand, Teachers may be more aware of gaps in implementation, workload challenges, or insufficient instructional follow-up.

On the other hand, the qualitative findings provided insights that are aligned with the quantitative findings. The findings collectively demonstrate that school leaders actively influence teachers' engagement in gender-responsive instructional practices. It was generally observed that Head Teachers encourage teachers to integrate equal learning opportunities for both boys and girls when preparing lesson plans and schemes of work. These findings are aligned with previous studies that underline the significant role of school leadership support in advancing gender-responsive pedagogy. Óskarsdóttir, Donnelly, Turner-Cmuchal, and Florian (2020), for example, observed that leadership actions such as promoting accountability and providing clear guidelines strengthen teachers' consistency in preparing inclusive teaching documents. Similarly, Sruthi (2024) found that, sustained leadership encouragement enhances teachers' confidence and willingness to integrate gender-sensitive strategies into lesson planning.

Generally, the findings confirm that school leadership and management play a significant role in enhancing teachers' preparation of gender-responsive schemes of work and lesson plans. Notably, effective leadership supports involve providing guidance, resource allocation, and policy influence that encourage the integration of gender-responsive practices in lesson planning and scheduling. However, it is important to note that the variations in responses suggest that some teachers may experience some challenges in receiving leadership support more than others. This calls for improvement in making this support more consistent and responsive to teachers' actual needs.

Preparation and Use of Gender-Responsive Teaching and Learning Aids

The descriptive results demonstrate that both teachers and SCMs perceive school leadership and management as supportive of teachers in enhancing the preparation of gender-responsive teaching and learning aids. Teachers reported a positive perception, though with some variability in their responses (M = 3.87, SD = 1.13), while SCMs expressed an even stronger agreement with a relatively higher consistency in their views (M = 4.17, SD = 0.94). Additionally, the negative skewness values for both teachers and SCMs suggest that the majority of respondents strongly agreed that school leadership plays a positive supportive role in fostering the preparation of gender-responsive instructional aids. On the other hand, the independent samples t-test revealed a statistically significant difference between teachers and SCMs, t (343) = –2.07, p < .05. This indicates that SCMs rated leadership and management support for the preparation of gender-responsive teaching and learning aids significantly higher than teachers. The inferential results therefore concur with the descriptive findings, confirming that the SCMs perceive leadership and management support more positively compared to classroom teachers.

The qualitative results from interviews and FGDs with Head Teachers, WEOs, DPPEOs, and DSQAOs revealed three major themes namely: promotion of gender-responsive instructional practices; leadership support through monitoring, coaching, and mentoring; and inconsistencies in teachers' capacity to develop gender-responsive teaching and learning aids. In case of promoting gender-responsive instructional practices, WEOs, DPPEOs, and DSQAOs expressed that, teaching and learning aids used by teachers take into consideration equal participation of both girls and boys in the learning process. As commented by one of the DSQAOs during FGD session:

"…teachers mainly identify and use teaching and learning aids which are not biased to any of the gender…" (DSQAO FGD, June 2024).

The comment by the DSQAO underscores the reflection of gender-responsive school leadership which influences teachers' adoption of gender-responsive practices in all aspects of the teaching and learning process.

Similarly, WEOs and DSQAOs highlighted the strong leadership support through monitoring, coaching, and mentoring played by school leaders at various levels. During an interview, one participant was quoted saying that:

"In fact, school leaders have been active in supporting their teachers in various ways including coaching and mentoring towards inclusive guidelines on preparing teaching aids"

The above quote reveals the proactive role that school leaders play in fostering gender-responsive instructional practices. Notably, it suggests that leadership support goes beyond routine supervision and extends into hands-on professional guidance.

However, the qualitative results from FGDs with DSQAOs provided mixed insights in relations to the teaching and learning aids used by teachers. While some findings revealed positive opinions on the use of gender-responsive teaching and learning aids, others revealed that some of the teaching and learning aids were not gender-responsive. DSQAO commented that:

"…sometimes drawings do not reflect both genders especially those which are procured…. some are not that much reflecting gender equality…" (DSQAO FGD, June 2024).

The quote highlights the DSQAO's concern about gender representation in the use of teaching and learning aids that are bought by teachers. It suggests that some drawings and instructional materials may reinforce gender bias by failing to represent both boys and girls equally.

The quantitative findings demonstrate that school leadership and management plays a substantial role in supporting teachers towards preparation of gender-responsive teaching and learning aids. However, it was noted that SCMs strongly perceived the school leadership and management being supportive than what is actually experienced by teachers. This finding aligns with various previous empirical studies showing that mid-level leaders often hold more favourable perceptions of leadership practices due to their closer involvement in

supervision, coordination, and instructional support processes. Studies such as Chabalala and Naidoo (2021) and Mestry and Govindasamy (2021) report that, school leaders responsible for monitoring curriculum implementation frequently acknowledge stronger leadership support on instructional planning compared to teachers, who may experience practical challenges at classroom level.

Similarly, the qualitative insights from Head Teachers, WEOs, and DPPEOs concur with the quantitative findings highlighting leadership efforts such as mentoring, coaching encouragement, and motivation mechanisms aimed at strengthening gender-responsive instructional preparation. Notably, despite positive perceptions, findings reveal variability in the quality of teaching aids used. Some DSQAOs observed that drawings do not reflect both genders especially those which are procured, indicating inconsistencies and gaps in teachers' skills or awareness. This finding aligns with Kisilu (2025) who notes that many teachers lack adequate competencies in preparing gender-sensitive instructional materials. Thus, leadership intervention becomes essential.

Generally, the findings confirm that school leadership and management play a crucial role in supporting teachers' preparation of gender-responsive teaching and learning aids. In addition, the insights highlight specific leadership practices such as policy enforcement, coaching and mentoring, and continuous monitoring as key factors in promoting gender-responsive teaching practices. Moreover, the observed inconsistencies in findings suggest a need for specialised professional development programs for Head Teachers that focus on gender-responsive leadership to enhance their ability to guide teachers in preparing inclusive instructional materials.

Preparation and Use of Gender-Responsive Lesson Notes

The results show that both teachers and SCMs perceive school leadership and management as being supportive to their teachers towards preparation of gender-responsive lesson notes. Teachers reported a mean score of 3.75, while SCMs reported a relatively higher mean score of 4.11. similarly, the negative skewness values for both groups indicate that most respondents rated school leadership and management support above average, suggesting that the school leaders' efforts in promoting preparation of gender-responsive lesson notes are generally recognized as significant.

However, the relatively higher SD among teachers implies greater variability in their experiences of leadership support, suggesting the need for more consistent interventions. On the other hand, the independent samples t-test results showed that the difference in mean scores between the two groups was statistically significant t (343) = –2.90, p < .05. indicating that SCMs perceived leadership support for the preparation of gender-responsive lesson notes more positively than teachers.

The qualitative findings from interviews and FGDs provided insights on continuous mentorship to teachers; close monitoring and feedback giving; and ensure compliance on the use of recommended text books. Head teachers expressed that, they mainly speak and remind their teachers to ensure they prepare lesson notes that are gender responsive. During an interview session, one Head teacher was quoted saying that:

"…I speak to each teacher to ensure the content he or she prepares is gender-responsive. Also, I make follow up to ensure that the content prepared is gender-responsive…" (Head Teacher A10, June 2024).

The quote from the Head Teacher highlights the proactive role of school leadership in supporting teachers' preparation of gender-responsive lesson notes.

In a similar view, WEOs and DEOs expressed their role by emphasizing Head Teachers to ensure that, teachers use recommended text books in preparing lesson notes. This approach ensured that, the lesson notes that are prepared by teachers are gender-responsive. In addition, they always encourage Head Teachers to use MEWAKA to share experiences and emphasize teachers to employ gender-responsive pedagogy. One of the key informants said that:

"…I always encourage the use of recommended text books prepared by the Ministry of Education… Also, I insist them to ensure the use of MEWAKA in supporting teachers towards adopting gender-responsive practices…" (WEO A3, June 2024).

The quote from the WEO underscores the importance of using Ministry-approved textbooks in preparing lesson notes, ensuring that teachers follow standardized content aligned with gender-responsive practices.

The combined descriptive and inferential findings highlight that, although school leadership and management is generally viewed as supportive, teachers experience this support unevenly. This finding is in line with Larsson and Löwstedt (2023) who argue that, school leaders are more communicative or visible in their support to school governing bodies than to classroom teachers, possibly due to differences in interaction channels or leadership focus. Furthermore, qualitative findings provided insights that are aligned with the quantitative findings. Participants highlighted that school leaders are actively engaged in supporting their teachers through continuous mentorship; close monitoring and feedback giving; and ensure compliance on the use of recommended text books.

The observed findings imply a reflection of an effective school leadership and management whose role in supporting teachers' preparation of gender-responsive lesson notes is significant. The findings are in line with the study by UNESCO (2020) which highlights that, gender-responsive teaching is more effective in schools where leadership actively promotes equity-based practices. The consistency between these findings and existing literature underscores the importance of school leadership involvement in achieving gender-sensitive education, reinforcing the need for continuous capacity building for school leaders.

CONCLUSIONS AND RECOMMENDATIONS

With respect to the first objective, the study concludes that school leadership and management is instrumental in supporting their teachers toward preparation of gender responsive schemes of work and lesson plans ensuring alignment with the national educational standards. To strengthen this role, the study recommends for an adoption of a structured approach to integrating gender-responsive pedagogical practices in teaching and learning in which school leaders should provide regular guidance and constructive feedback during development of schemes of work and lesson planning. Moreover, education authorities should institutionalize training programs focused on instructional leadership, equipping school leaders with practical competencies in equitable curriculum planning and supervision.

Regarding the role of school leadership and management in enhancing preparation and use of gender-responsive teaching and learning aids, the study revealed that school leaders play a critical role in supporting teachers to prepare and utilize gender responsive teaching and learning aids. Based on this finding, the study recommends that, school leaders should facilitate workshops and collaborative sessions where teachers can receive training and support in designing gender sensitive teaching materials. In addition, the ministry of education should establish policy regulations that ensure gender-responsive material preparation a mandatory component of teacher training and supervision frameworks. Furthermore, schools should be provided with adequate financial and material resources to enable the production and use of quality instructional aids.

Finally, the study established that, school leaders are instrumental in guiding teachers to prepare gender responsive lesson notes, which contribute significantly to a well-organized gender equitable instruction. It is therefore recommended that, school leaders should establish regular lesson plans review sessions accompanied by timely and constructive feedback to ensure lesson notes maintain gender responsive pedagogical standards. Additionally, school leaders are also encouraged to promote peer collaboration and mentorship practices where experienced teachers and school leaders support their colleagues in improving the quality of lesson planning and instructional delivery.

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Ethical Declaration: The author declares that the research was approved by the relevant government authorities

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