# CHALLENGES FACED BY MATHEMATICS TEACHERS IN ASSESSING AND EVALUATING THE NEW LOWER SECONDARY CURRICULUM. A CASE STUDY IN TORORO DISTRICT.

**BY**

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28TH November, 2023

# Declaration

I, Chebet Gilbert, hereby declare that this report is my original work and has never been submitted to any college, university or other organizations for any award.

Chebet Gilbert

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# Approval

This dissertation has been submitted for examination with the approval of my university supervisor.

Signature..... Date.28th/12/2023.....

Mr. Jackson Okiring.



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# Dedication

I dedicate this report to my late loving parents, Mr. Cherop Julius and Ms. Chesakit Joseline even if you are no more, for it was them who laid the foundation of my academic journey. Much thanks to my brother Mr. Musobo Richard and my Guardians Mr. kitiyo Alfred and Ms. Yeko Josephine, for where I am because of their loving support and generosity towards me. I love you so much.

I would also like to dedicate this work to my siblings; Linet, George, Boniface, Clement, Calvin and to my uncle David and the entire family because they have always been there, I hope I can make you also proud.

Also to my friends and course mates that is to say Patrick, Andrew, Pascal, Daniel, Grace, and Brenda. We have always never hesitated to help one another where we can and I know you all appreciated and loved so deeply, I wish you all the very best too.

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# Abstract

This report presents the results of study of challenges faced by teachers of mathematics in assessing and evaluating the new lower secondary curriculum in Tororo District. In February 2020, The New Lower Secondary School Curriculum (NLSC) commenced with Senior One and was implemented in stages. Regarding data gathering and analysis, this study adopts a quantitative methodology. Data was collected using a self-mode questionnaire. This research was carried out were 30 participants were sampled.

The findings show that: Majority 16 (53.5%) out of 30 respondents reported that they had challenges when assessing and evaluating the new lower secondary curriculum. In terms of school challenges, results show that: 53% had inadequate training meaning that they have not yet attended seminars, workshops and mathematics conferences, 80% didn't have effective collaboration between themselves for example sharing of work regarding the new curriculum, 87% reported that the schools lack infrastructure to accommodate all the learners, 85% don't use technology and 70% reported about the inadequate resources while assessing and evaluating the new curriculum.

The study found that teachers had a big challenge in the new curriculum, also the study suggested that the school administrators and the Government should provide training to the teachers, provide more infrastructure and resources and to provide teachers with the use of technology in assessing and evaluating the new lower secondary curriculum.

# 1.0 CHAPTER ONE: INTRODUCTION.

## 1.1 Background.

Mathematics is one of the basic subjects that require students to have an understanding of various skills and ways individuals choose to have their daily lives. Man uses mathematics to better understand the world in which he lives, and the world itself modifies mathematics; (Slavin 1996). Mathematics education has undergone significant changes over the years, driven by advancements in pedagogical approaches, technological innovations, and evolving societal needs. The introduction of the new lower secondary curriculum reflects a shift towards more student-centered learning, emphasizing critical thinking, problem-solving skills, and real-world applications. The decision to implement the new lower secondary curriculum is typically motivated by several factors. These may include the need to align with international standards, address gaps in existing curricula, enhance students' mathematical literacy, promote equity and inclusivity, and prepare students for future academic and professional pursuits.

In February 2020, the New Lower Secondary School Curriculum (NLSC) commenced with Senior One and was implemented in stages. The curriculum strives to raise the standard and usefulness of secondary education as well as provide post-primary students with the skills they need to succeed in the workforce (Alghamdi and Holland 2020). The new curriculum points out the key learning outcomes;

Individuals who can demonstrate self-motivation, self-management and know their own preferences, strengths, and limitations. They should be responsible and patriotic citizens, who cherish values, apply environmental and health awareness when making decisions.

Life-long learners, who can direct their own learning, seek opportunities for personal and professional development, be positive contributors to society, and demonstrate knowledge of emerging needs of the society.

Emphasis on values adapted from the National Ethics and Values Policy 2013, such as respect for humanity and environment, honesty, justice, hard work, self-reliance, integrity and innovativeness. The new curriculum will foster critical thinking skills, communication, cooperation and self-directing learning, mathematical computing and ICT proficiency.

Learners will appreciate the connection between subjects and the complexities of life such as environmental issues, health awareness and life skills.

Classroom teaching has been reduced to five hours a day from 8:30am to 2:55pm to allow for research, self-study, and recreation. The number of subjects has reduced from 43 to 21. Kiswahili, Entrepreneurship, Religious Education and Physical education are compulsory for learners at Senior One and Two. A school is expected to offer 12 subjects at Senior One and Two, out of which 11 are compulsory, while one is elective. At Senior Three and four, a learner is expected to exit with a minimum eight subjects and a maximum of nine subjects.

On 3rd Dec 2021, the prime minister and leader of Government Business in parliament, Ms. Robinah Nabbanja, informed legislators that Uganda's education sector is on course in rolling out the new lower secondary school curriculum when schools reopen in January 2022 (Nabunya 2020). According to the premier, staffing and purchase of instructional materials are key areas in ensuring effective implementation of the new curriculum.

Nabbanja said that instructional materials for the new lower secondary, that is, senior one and senior two have been procured and were delivered by the end of January 2022, whereas the procurement of materials for senior three and senior four was ongoing. The premier reacted by stating Therefore, to understand the challenges faced by the teachers of mathematics in assessing and evaluating the new lower secondary curriculum is of great benefit to ensure the curriculums successful implementation and improve student achievement. Teachers are key stakeholders in the education system and are directly responsible for implementing and evaluating curriculum changes (Tarkar 2020). The teachers' perspectives, experiences, and challenges are valuable in understanding the practical implications of the new curriculum. This study will focus on the challenges faced by the teachers of mathematics in order to identify specific areas of difficulty and develop the ways to support teachers in overcoming these challenges.

In conclusion, the context of educational reform, the significance of assessment and evaluation, the perspective of teachers as implementers, and the need to address the research gap all contribute to the background of the study on challenges faced by the teachers of mathematics in assessing and evaluating the new lower secondary curriculum. By investigating these challenges,

the study aims to provide insights and recommendations to support mathematics teacher's ineffectively assessing and evaluating student learning with the new curriculum framework.

# 1.2 Problem statement:

The introduction to the new lower secondary curriculum; provides an overview of the context in which the new lower secondary curriculum is being implemented, highlights the goals and objectives of the curriculum reform and explains the rationale behind introducing the new curriculum. The problem statement explains the importance of assessment and evaluation in education, thus emphasizes the significance of assessment and evaluation in measuring student learning outcomes, and the role of assessment in aligning teaching and strategies with curriculum goals. The implementation of the new lower secondary curriculum brings about various challenges for the teachers of mathematics particularly in the domain of assessing and evaluating student learning outcomes. The study aims to investigate and understand the specific challenges faced by teachers of mathematics when assessing and evaluating the new lower secondary curriculum.

# 1.3 Objectives:

## 1.3.1 General objective of the study:

The purpose of the study is to explore and understand the challenges faced by teachers of mathematics in assessing and evaluating the new lower secondary curriculum.

## 1.3.2 Specific objectives of the study:

a) To determine the difficulties teachers of mathematics, encounter in assessing students' development and learning outcomes under the revised lower secondary curriculum.
b) To find out the assessment techniques used by teachers of mathematics in light of the new curriculum.

## 1.4 Research questions:

a) What are the challenges faced by teachers of mathematics in evaluating students' progress and learning outcomes within the new lower secondary curriculum?

b) What assessment methods are currently being used by teachers of mathematics in the context of the new curriculum?

## 1.5 Scope of the study:

The scope is limited to Tororo District, in three different secondary schools and they include; Great Aubrey Memorial College, Tororo mixed secondary school and St Peters College from senior one, senior two and senior three and the teachers of mathematics in the three secondary schools.

## 1.6 Operational definitions:

i. **Assessment** refers to the process of gathering evidence of students learning, understanding and skills in mathematics through various methods such as tests, assignments, projects or observations.

ii. **Evaluation** refers to the systematic process of making judgements about students' performance and progress based on assessment data. It involves interpreting and using assessment results to inform, decision making, feedback and guiding.

iii. **New lower secondary curriculum** refers to the recently implemented or revised curriculum that outlines the learning.

iv. **Curriculum** refers to the subjects comprising a course of study in a school or college.

# Chapter 2: Literature review:

In light of the challenges faced by teachers of mathematics in evaluating students' progress and learning outcomes under the revised lower secondary curriculum, a number of studies have been investigated in Tanzania, Kenya, Uganda to ascertain the challenges teachers of mathematics face in assessing students' development and learning outcomes.

According to Owino et al. (2016), many teachers have not received adequate training on the new curriculum, leaving them ill-equipped to deliver it effectively. This lack of training has resulted in teachers feeling overwhelmed and uncertain about how to teach the new content (Owino et al., 2016). Moreover, the scarcity of resources such as textbooks, software, and other instructional materials has further hindered the effective implementation of the new curriculum (Kiplangat & Kiprop, 2017). A study conducted by Mushi (2018) found that many teachers of mathematics in Tanzania reported feeling unprepared to implement the new curriculum's assessment requirements. The study highlighted the need for comprehensive teacher training programs that focus on assessment literacy and provide teachers with the necessary skills and knowledge to effectively assess and evaluate student learning outcomes. A study conducted by Kizito and Nsubuga (2017) found that teachers of mathematics in Uganda reported a lack of professional development opportunities specifically focused on assessment practices. The study highlighted that without proper training, teachers may struggle to align their assessments with the learning objectives of the new curriculum, resulting in inaccurate evaluations of student performance. Research suggests that many teachers have not received adequate training or professional development opportunities to understand the intricacies of the new curriculum and its assessment requirements (Smith & Stein, 2017). This lack of preparedness can lead to difficulties in accurately assessing student progress and providing meaningful feedback.

The shift towards more inquiry-based and problem-solving approaches in mathematics education requires teachers to develop assessments that go beyond traditional methods of evaluation (National Council of Teachers of Mathematics, 2014), the revised lower secondary curriculum often emphasizes collaborative and inquiry-based learning approaches in mathematics education. However, assessing group work or collaborative activities can be challenging for instructors. They need to develop assessment strategies that evaluate both individual contributions and the overall

group's performance. This requires careful planning and design of assessment tasks that capture students' collaborative skills and their ability to work effectively in teams. As observed by Mwendwa et al. (2015), the new curriculum emphasizes the development of critical thinking and problem-solving skills, which can be challenging for students who struggle with basic mathematical concepts. Moreover, the lack of diagnostic tools to identify student learning difficulties makes it difficult for teachers to provide targeted interventions and support (Mwendwa et al., 2015). Research indicates that designing effective assessments that measure conceptual understanding, critical thinking skills, and application of mathematical knowledge can be challenging for teachers (Hill et al., 2016). Teachers of mathematics need to create assessments that allow students to demonstrate their understanding through real-world problem-solving scenarios rather than relying solely on rote memorization or procedural knowledge.

As noted by Mwendwa et al. (2015), the new curriculum emphasizes the use of continuous assessment, which requires teachers of mathematics to develop and administer frequent assessments to monitor student progress. However, many teachers of mathematics lack the skills and knowledge to design and implement effective assessment tools, leading to inaccurate or incomplete assessments (Mwendwa et al., 2015). Furthermore, the lack of standardized assessment tools makes it difficult to compare student performance across different schools and regions (Kiplangat & Kiprop, 2017).

A study conducted by Namukasa (2018) highlighted that teachers of mathematics in Uganda face challenges in managing large classes, resulting in limited opportunities for formative assessment and timely feedback. The study emphasized that the lack of individualized attention can lead to incomplete understanding of students' strengths and weaknesses, which may affect the accuracy of evaluations.

Furthermore, inadequate infrastructure, such as overcrowded classrooms or a lack of appropriate facilities for conducting assessments, can also hinder effective evaluation processes. For example, conducting practical assessments or group activities may be challenging due to limited space or insufficient equipment. A study by Kafyulilo et al. (2019) highlighted these resource-related challenges is faced by teachers of mathematics in Tanzania. The researchers emphasized the importance of providing schools with adequate resources and infrastructure to support effective

assessment practices and ensure the successful implementation of the new curriculum. A study by Okello et al. (2019) emphasized that inadequate resources hindered the teachers of mathematics ability to implement effective assessment strategies. Teachers reported relying on outdated textbooks or improvising teaching aids, which may not align with the content and skills emphasized in the new curriculum. This limitation can impact the validity and reliability of assessments, as well as hinder accurate evaluation of student learning outcomes.

According to Mushi (2018) explored the influence of cultural factors on the teachers of mathematics assessment practices in Tanzania. The findings highlighted the need for culturally responsive assessment strategies that consider students' cultural backgrounds and provide equitable opportunities for all learners.

A study by Mwakapenda (2017) explored the challenges faced by the teachers of mathematics in implementing the new curriculum's language requirements. The findings revealed that teachers often faced difficulties in explaining mathematical concepts and assessing students' responses accurately due to language barriers. The study recommended providing additional support and training to help teachers of mathematics overcome these language-related challenges. According to Kiguli-Malwadde et al. (2016) highlighted that teachers of mathematics faced difficulties in assessing students' understanding due to language barriers. Teachers of mathematics reported challenges in interpreting students' responses accurately, especially when students used local languages or mixed languages during assessments. This language barrier can lead to misinterpretation of student performance, affecting the validity of assessments.

Additionally, time constraints can also impact the administration of assessments, especially when there is a large number of students to assess. Grading and providing timely feedback become challenging tasks for teachers of mathematics, potentially compromising the quality and effectiveness of assessment practices. A study by Kafyulilo et al. (2019) highlighted the issue of time constraints faced by teachers of mathematics in Tanzania. The researchers emphasized the need for effective time management strategies and suggested allocating dedicated time for assessment activities within the school schedule. According to Owino et al. (2016), the new curriculum requires teachers of mathematics to cover a wide range of topics within a short period, leaving them with little time to assess student learning effectively. Moreover, the increased

workload due to the new curriculum has led to burnout and stress among teachers, affecting their motivation and productivity (Owino et al., 2016).

Teachers of mathematics face difficulties in striking a balance between covering the required content and ensuring depth of understanding. The pressure to cover all topics within a limited timeframe can lead to superficial teaching and assessment practices that do not promote deep conceptual understanding (Boaler, 2016). This challenge is particularly significant when teachers are expected to prepare students for standardized tests that prioritize content coverage over conceptual understanding. Moreover, assessing students' depth of understanding requires more nuanced evaluation methods, such as open-ended questions or performance-based tasks. These types of assessments can be time-consuming to design, administer, and evaluate, adding an additional burden on teachers of mathematics (National Council of Supervisors of Mathematics). 2013).

In conclusion, the literature on the difficulties that the teachers of mathematics encounter in assessing students' development and learning outcomes under the revised lower secondary curriculum highlights several key challenges. These include aligning assessments with the curriculum, assessing problem-solving abilities and critical thinking skills, providing timely and constructive feedback, integrating technology in assessment practices, and evaluating group work effectively. Addressing these challenges requires ongoing professional development for the teachers of mathematics and a thoughtful approach to assessment design and implementation. One of the key themes that emerge from the literature is the importance of formative assessment in the new curriculum. Formative assessment is seen as a crucial tool for measuring student progress and adjusting instruction to meet their needs. According to Black and Wiliam (1998), formative assessment should be used to provide feedback to students, identify areas where they need improvement, and adjust teaching strategies accordingly. Similarly, Leung et al. (2012) argue that formative assessment can help teachers of mathematics to monitor student learning and make adjustments to instruction to improve student achievement.

Another important theme in the literature is the use of technology-based assessment tools. With the increasing availability of digital resources, the teachers of mathematics are using technology to enhance their assessment practices. For example, online quizzes and games can provide

immediate feedback to students and allow teachers to track their progress over time (Kinzer & Leary, 2005). Additionally, technology can facilitate collaborative learning and peer assessment, which can provide valuable insights into student understanding and promote deeper learning (Hill & Hannafin, 2011).

Finally, the literature emphasizes the need for ongoing professional development for the teachers of mathematics to support the implementation of the new curriculum. As teachers of mathematics adapt to new assessment techniques and technologies, they need opportunities to learn and refine their practice. According to Guskey (2002), professional development should be ongoing and focused on the specific needs of teachers and students. Moreover, it should include opportunities for teachers to share their experiences and collaborate with colleagues to improve their practice.

# Chapter 3: Methodology

This chapter explores the research design, source of data, study setting, study variables, data collection techniques, and data collection instruments (Williams 2007).

## 3.1 Research design:

Research design, according to (Leshem 2007), is the conceptual framework through which the research is carried out. He claims that a research design serves as the general framework for gathering, measuring, and analyzing data. In other words, he says, a research design is a tactic the researcher employs to discover additional resources to address the issue under investigation. (Brooks 2015) added that a research design is a comprehensive blueprint for how the research study will be carried out. Due to its capacity to use samples to address issues linked to curriculum, the study will employ a quantitative approach to data collection and analysis.

## 3.2 Sources of data:

Both primary and secondary sources of data will be used to support the study.

### 3.2.1 Primary data:

Primary data refers to the data originated by the research for the first time and collected through questionnaires. The information will be derived directly from the respondents through the questionnaires.

### 3.2.2 Secondary data:

Secondary data refers to data that has already been collected. Information was collected from acknowledged studies about the study objectives to obtain secondary data. These mostly included online journals and electronic books; library books; research dissertations; and learning websites; I will write a letter requesting for the methods from mathematics teachers used for assessing and evaluating students for the new lower secondary curriculum and the previously used curriculum for students from senior one, two and three.

## 3.3 Study setting:

The study will be carried out in three different schools and that is Great Aubrey Memorial College, Tororo mixed secondary school and St Peters College. The study is limited to teachers of senior one, senior two and senior three. 10 teachers per school will be sampled for the study.

## 3.4 Sampling technique:

(Taherdoost 2016) the sampling process has been defined as the process of selecting a sample from a larger population. According to (Pace 2021) a sample is referred to as a portion of the entire targeted group that accurately reflects the characteristics of the population. It might be chosen using non-probability sampling or probability sampling (Acharya 2013). For example, in this research a sample of 30 respondents participated in the study, teachers of senior one, senior two and senior three participated in the sampling process.

## 3.5 Study variables:

### 3.5.1 Independent variable:

An independent variable is one that causes another. The independent variables in the study is the new lower secondary curriculum. Independent variables represent the factors that were introduced or implemented and can potentially impact on how teachers of mathematics assess and evaluate their students' progress.

### 3.5.2 Dependent Variable:

A dependent variable is one that is caused by the other, a dependent variable depends on an independent variable. In this study, the dependent variable is the effectiveness of the assessment and evaluation methods.

## 3.6 Data collection techniques:

For this research study, For the purpose of learning more about the attitudes, opinions, actions, and experiences of the target group, questionnaires will be the main method of data gathering. The

questionnaires will be administered in paper-based and face-to-face formats, with a mix of openended and closed-ended questions. The purpose of using questionnaires will be to efficiently collect a large amount of data in a structured and standardized way. The researcher carefully designed the questionnaire to ensure the accuracy and reliability of the data collected, while taking into account potential biases such as social desirability bias.

Overall, questionnaires will be used to prove a valuable research tool for exploring the research questions and providing insights that informed policy and practice.

### 3.6.1 Data collection tools:

The questionnaire was designed to elicit general information from teachers in Great Aubrey Memorial College, Tororo mixed secondary school and St Peters College about their perceptions, knowledge and opinions of the new lower secondary curriculum. The questionnaire consisted of section A, B and C - section A contained eight closed-ended questions to provide the personal challenges the respondents face while assessing and evaluating the new lower secondary curriculum; section B contained five closed-ended questions about the challenges faced by the schools while assessing and evaluating the new lower secondary curriculum; and section C contained two open-ended questions about their opinions on the challenges the schools are facing while assessing and evaluating the new lower secondary curriculum.

The questionnaire contained two open-ended questions and 13 closed-ended questions. Each domain was measured with many items on a 4 Liker scale of 1-Strongly Agree (SA), 2-Agree (A), 3-Not Sure (NS), 4-Degree (D) (Adeyeye et al, 2022).

# Chapter 4: Results and discussion

This chapter presents and discusses the findings of the study.

## 4.1 Findings on the challenges affecting both the teachers and the schools regarding the new lower secondary curriculum.

| Age of the respondents | Number of respondents | Percentage |
|---|---|---|
| 20-29 years | 18 | 60% |
| 30-39 years | 10 | 33% |
| 40 years and above | 2 | 7% |

*Table 1 Age of the respondents.*

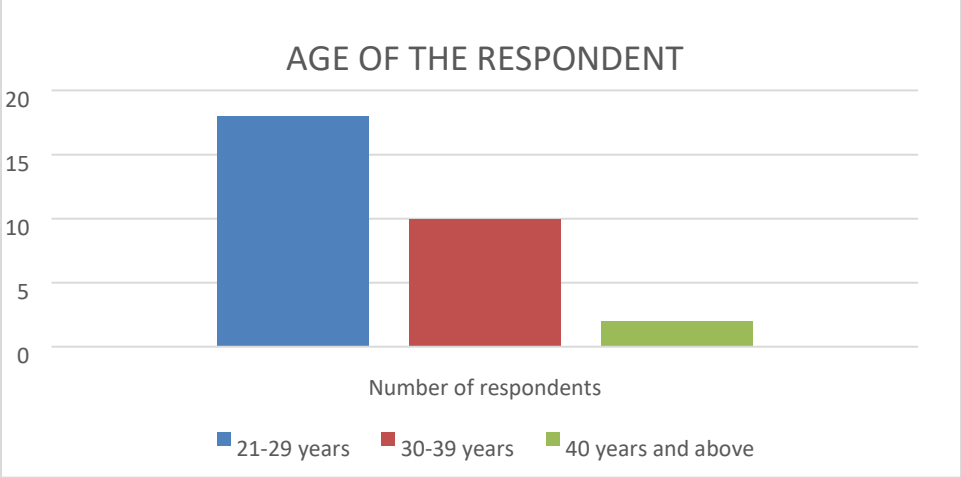


*Figure 1 Representation of the age distribution of the respondents.*

Out of the 30 respondents that participated in the study, 18 (60%) were in the age bracket of 2029 years while 10 (33%) were in the age bracket of 30-39 years and 2 (7%) were 40 years and above.

| Gender | Number of respondents | Percentage |
|---|---|---|
| Male | 25 | 83% |
| Female | 5 | 17% |

*Table 2 Gender of the respondents.*

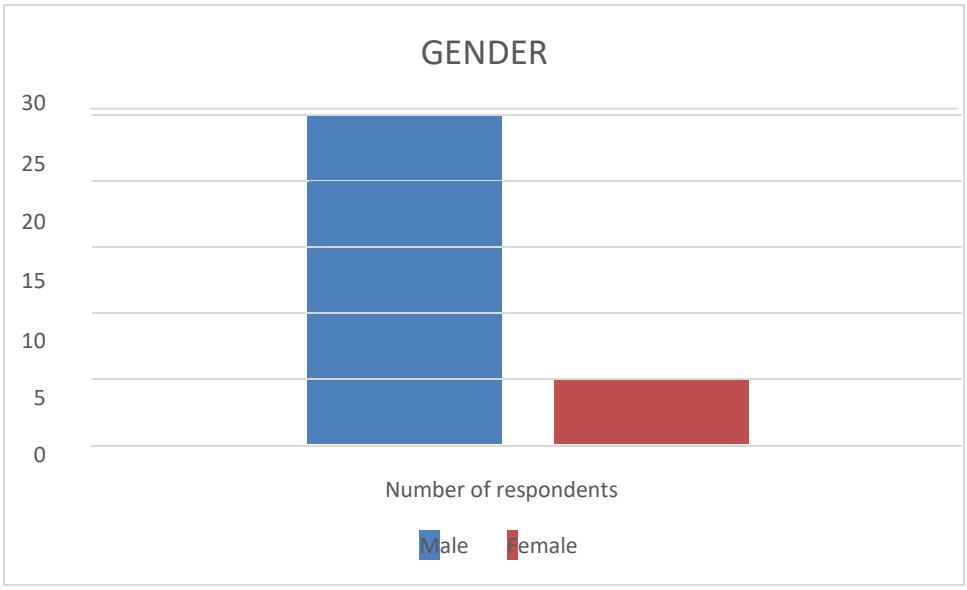


*Figure 2 Representation of gender distribution of respondents.*

Out of the 30 respondents that participated in the study, majority 25 (83%) were males while minority 5 (17%) were females.

| Region of the country | Frequency | Percentage |
|---|---|---|
| North | 3 | 10% |
| East | 21 | 70% |

| | | |
|---|---|---|
| Central | 2 | 7% |
| West | 4 | 13% |

*Table 3 Places of origin of respondents.*

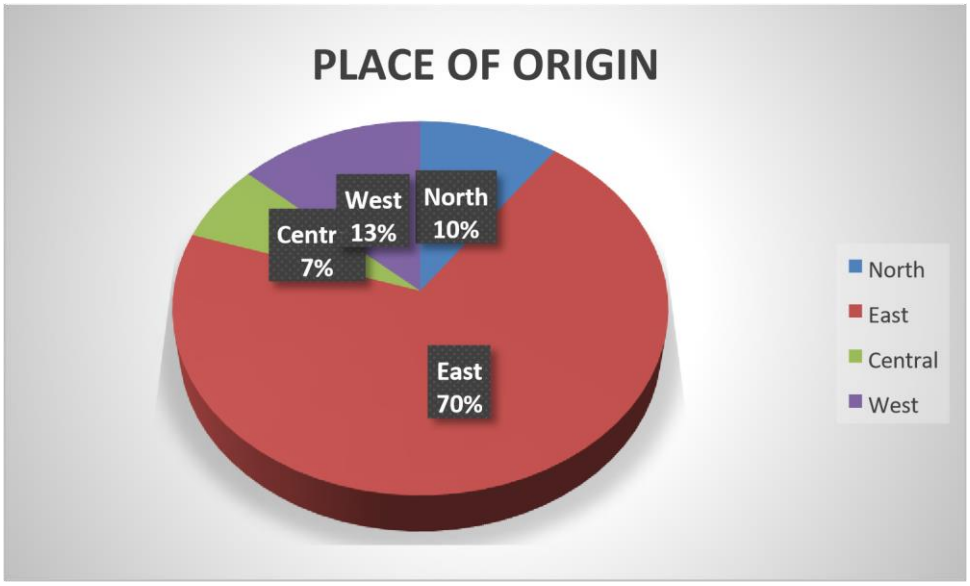


*Figure 3 Representation of places of origin of respondents.*

Out of the 30 respondents that participated in the study, 21 (70%) were from eastern Uganda, 4 (13%) from western Uganda, 3 (10%) from northern Uganda and 2 (7%) from central.

### 4.1.1 Teachers challenges regarding the new lower secondary curriculum.

| **Indicator** | SA | A | NS | D | Percentage |
|---|---|---|---|---|---|
| I always face a challenge when assessing and evaluating the new lower secondary curriculum. | 36.7% | 53.3% | 3.3% | 6.7% | 100% |
| I have a big challenge when it comes to evaluating student performance under the new lower secondary curriculum. | 30.0% | 46.7% | 6.7% | 16.7% | 100% |

| | | | | | |
|---|---|---|---|---|---|
| I am confident in my ability to design and implement effective assessment and evaluation under the new curriculum. | 46.7% | 33.3% | 13.3% | 6.7% | 100% |
| I can collaborate with colleagues to develop and refine assessments under the new curriculum. | 56.7% | 36.7% | 0.0% | 6.7% | 100% |
| I can use technology to enhance assessment and evaluation under the new curriculum. | 50.0% | 43.3% | 3.3% | 3.3% | 100% |

*Table 4 Teachers challenges regarding the new curriculum.*

Majority 16 (53.3%) of the respondents face challenges when assessing and evaluating the new lower secondary curriculum while 2 (6.7%) had no challenge and 1 (3.3%) was not sure of any challenge when assessing and evaluating the new lower secondary curriculum, which implied that most of the respondents face challenges when assessing and evaluating the new lower secondary curriculum while 11 (36.7%) had challenges when assessing and evaluating. Therefore, many teachers of mathematics face challenges when assessing and evaluating the new lower secondary curriculum.

14 (46.7%) out of 30 respondents had a big challenge when it comes to evaluating student performance under the new curriculum while 5 (16.7%) had no challenge when evaluating student performance and 2 (6.7%) were not sure of any challenge when evaluating student performance under the new curriculum. Those with a big challenge when it comes to evaluating student performance under the new curriculum found it difficult to evaluate student performance.

Majority 17 (56.7%) out of 30 respondents can collaborate with colleagues to develop and refine assessments and evaluations under the new curriculum while 2 (6.7%) do not collaborate with colleagues. This implied that many teachers were able to work in collaboration to develop and refine assessments under the new curriculum.

15 (50.0%) out of 30 respondents can use technology to enhance assessment and evaluation under the new curriculum while 1 (3.3%) were not able to use technology and 1 (3.3%) was not sure.

This implied majority had computers and able to use the available technology devices to enhance assessment and evaluation under the new curriculum as emphasized by (Hill & Hannafin, 2011).

### 4.1.2 School challenges regarding the new lower secondary curriculum.

| Indicator | SA | A | NS | D | Percentage |
|---|---|---|---|---|---|
| We have challenges while assessing and evaluating the new lower secondary curriculum. | 23.3% | 53.5% | 10.0% | 13.3% | 100% |
| Teachers should provide equitable assessment and evaluation opportunities for all students in the new lower secondary curriculum. | 70.0% | 23.3% | 3.3% | 3.3% | 100% |
| Availability of inspectors for support and supervision while at school. | 16.7% | 36.7% | 13.3% | 33.3% | 100% |
| We have a key challenge in the new lower secondary curriculum when it comes to assessing and evaluating student learning. | 16.7% | 46.7% | 13.3% | 23.3% | 100% |
| Teachers need to ensure that they are effectively assessing and evaluating student learning in the new lower secondary curriculum. | 60.0% | 33.3% | 3.3% | 3.3% | 100% |

*Table 5 School challenges regarding the new curriculum.*

Majority 16 (53.5%) out of 30 respondents reported that they had challenges when assessing and evaluating the new lower secondary curriculum while 4 (13.3%) reported that they had no challenge and 3 (10.0%) were not sure if they had any challenge. This implied that the teachers had challenges when assessing and evaluating the new curriculum. These has contributed to decline in the assessment and evaluation of the new lower secondary curriculum.

There were 21 (70.0%) out of 30 respondents who reported that teachers provide equitable assessment and evaluation opportunities for all students while 1 (3.3%) reported that teachers do not provide equitable assessment and evaluation opportunities and 1 (3.3%) was not sure if teachers were providing equitable assessment and evaluation opportunities. This implied that majority of the teachers were providing equitable assessment and evaluation opportunities for all students. Thus assessment and evaluation enables teachers of mathematics to equally assess and evaluate learners.

11 (36.7%) out of 30 respondents were sure that inspectors were available for support and supervision while at school, while 10 (33.3%) reported that inspectors do not provide any support and supervision while at school and 4 (13.3%) were not sure if the inspectors were available to provide support and supervision while at school. This means that provide support and also supervise teachers to provide a conducive learning environment to the teachers while at school. This enables the inspectors to identify the challenges faced by teachers while assessing and evaluating the new lower secondary curriculum.

There were 14 (46.7%) out 30 respondents who reported teachers face a key challenge while 7 (23.3%) reported that teachers do not face any key challenge and 4 (13.3%) were not sure if teachers face any key challenge when assessing and evaluating the new lower secondary curriculum.

There were 18 (60.0%) out of 30 respondents who reported that teachers need to effectively assess and evaluate student learning while 1 (3.3%) reported that teachers are not effectively assessing and evaluating student learning and 1 (3.3%) was not sure if teachers were effectively assessing and evaluating the new lower secondary curriculum.

### 4.1.3 Respondents views on the challenges.

Training of teachers.

Collaboration.

Infrastructure.

Use of technology.

Resources.

Guidelines and methodologies.

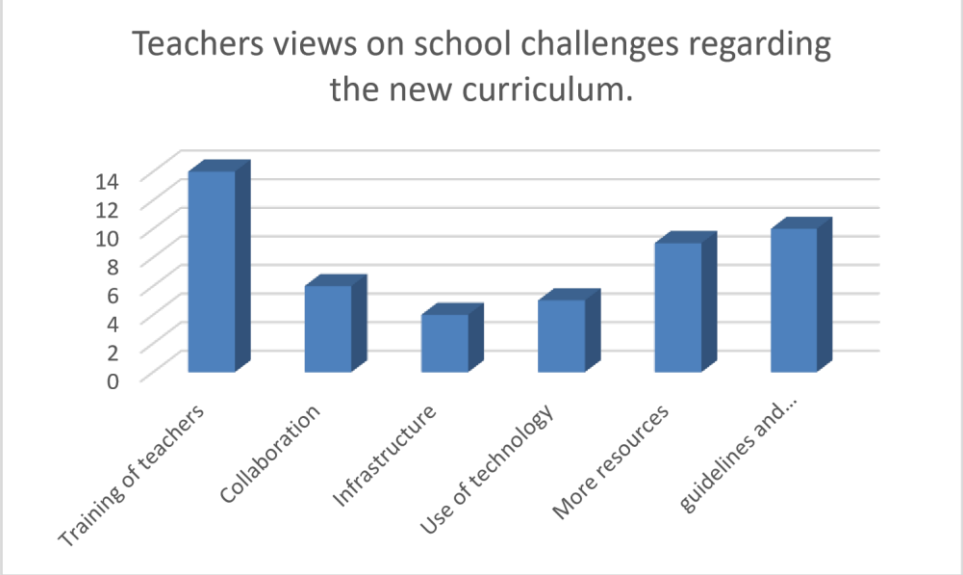


*Figure 4. The views of the respondents regarding the challenges faced by the teachers are summarized on the graph above.*

Training of teachers.

Many teachers have not received adequate training on the new curriculum, leaving them illequipped to deliver it effectively. This lack of training has resulted in teachers feeling overwhelmed and uncertain about how to teach the new content (Owino et al., 2016). Inadequate training was cited by 14 respondents as a major obstacle.

Collaboration.

According to the respondents, effective collaboration between teachers and facilitators of the new lower secondary curriculum is a very big challenge. This is because they do not have enough time to meet and discuss on the matters regarding the new lower secondary curriculum.

Infrastructure.

Inadequate infrastructure, such as overcrowded classrooms or a lack of appropriate facilities for conducting assessments, hindered effective evaluation processes. For example, conducting practical assessments or group activities may be challenging due to limited space or insufficient equipment. A study by Kafyulilo et al. (2019) highlighted these resource-related challenges is faced by the teachers of mathematics.

Use of technology.

With the increasing availability of digital resources, many teachers of mathematics do not know how to incorporate technology to enhance their assessment and evaluation practices. This lowered the assessment and evaluation using technology in the new lower secondary curriculum.

Resources.

A study by Okello et al. (2019) emphasized that inadequate resources hindered the teachers of mathematics ability to implement effective assessment strategies. Teachers reported that relying on outdated textbooks or improvising teaching aids, which may not align with the content and skills emphasized in the new curriculum. This limitation had an impact on the validity and reliability of assessments, as well as hindering accurate evaluation of student learning outcomes and thus the government should provide funds to facilitate the learning.

Guidelines and methodologies.

Majority of the teachers reported that they lacked guidelines and methodologies in assessing and evaluating the new curriculum. This implied that teachers were not provided with the adequate guidelines and methodologies to equip the teachers with the new curriculum techniques.

# Chapter 5: Conclusion and recommendations.

In this chapter, a summary of what has been done in the study is given. Directions and some guiding questions for further research are also suggested.

## 5.1 Conclusion

The study examined teachers and the school challenges that affected teachers of mathematics in assessing and evaluating the new lower secondary curriculum at Great Aubrey Memorial College, Tororo Mixed Secondary school and St Peters College in Uganda particularly in Tororo district. The study employed 30 respondents. Teachers challenges included; lack of training on how to handle the new curriculum, never had collaboration amongst themselves, inadequate infrastructure in many schools because of the big population, lack of the skills in using technology to assess and evaluate the new curriculum, shortage of resources in many schools and teachers lacked guidelines and methodologies in assessing and evaluating the new curriculum.

## 5.2 Recommendations

### 5.2.1 School administration

The schools need to organize trainings and seminars for the teachers to enable them attain the skills in the new curriculum. Conducting training and seminars within the teachers in a school and also outside the school in the district to enable them acquire skills.

Schools should encourage the use of ICT in the new curriculum. This enables teachers and learners to become creative and can solve day today challenges.

### 5.2.2 Government/Ministry of education.

They should allocate more resources to the government aided schools and also engage in public private partnership for the private institutions so that they can get access to scholastic materials like textbooks.

They should also construct more infrastructure in government aided schools and encourage the private institutions to construct more learning areas (classrooms) to reduce on the teacher student ratio and to enable learners to have adequate space.

Guidelines and methodologies should be setup by government to enable teachers have the required content and techniques of handling the new curriculum.

### 5.2.3 Teachers

Effective collaboration should be developed by teachers in order to enable them acquire skills within themselves. Collaboration bridges the gap between the teachers and students to enable them actively engage themselves in the teaching and learning process.

### 5.2.4 Community

They need to support the schools with materials and ideas regarding the new curriculum for example the setup of the classrooms.

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