

Access and Use of Teaching and Learning Materials from a Copyright Perspective in Kenya

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Executive summary

This report presents the findings of a study conducted in Kenya, focusing on the access and use of teaching and learning materials from a copyright perspective. The study aimed to identify the teaching materials used in class, strategies to access them, teacher's knowledge of copyright laws, copyright-related challenges that teachers face, and ways of overcoming them.

In responding to the research questions, the study further assessed teachers' autonomy in selecting teaching and learning materials, their ability to supplement and adapt them, and the compatibility of copyright legislation with cross-border teaching and learning needs in the digital era. It also explored the alignment of copyright laws with providing quality education as a public good.

The literature review emphasizes the importance of addressing copyright-related issues concerning access and use of teaching and learning materials. As it were, limited access to teaching and learning materials directly impacts the quality of education, resulting in insufficient teaching materials and lower student engagement and achievement.

The study adopted a mixed methods approach, combining quantitative and qualitative data collection and analysis techniques. It used a convergent parallel research design, which integrates quantitative and qualitative research techniques. To ensure a representative sample, stratified purposive sampling techniques were employed. 107 of Kenya's three levels of education; primary, secondary and tertiary, drawn from all 47 counties participated in the study.

The discussion section critically analyzes the findings of the study based on Section 26 of the Kenya Copyright Act 2001, which outlines copyright exceptions and limitations for education, the eight research questions, and existing empirical literature. The exceptions outlined in section 26 promote accessibility to copyrighted materials in specific contexts, such as education, research, dissemination of knowledge, and public interest needs.



The findings indicate that most teachers are not conversant with modes of handling cross-border teaching; there is a significant use of digital teaching and learning materials, commercial and non-commercial; teachers frequently use open-access and free and online materials; several Kenyan teachers are somewhat familiar with copyright laws; prohibitive costs and limited permission are a challenge experienced by Kenyan teachers; teachers access copyright-protected teaching and learning materials using various strategies including alternative print-based resources through the internet and licensed materials, creating their own original content, utilizing open educational resources (OER), and obtaining permission from copyright owners directly.

The study recommends further research to measure the extent of access and use of teaching and learning materials, particularly digital materials, through libraries, particularly in tertiary education. Policy and legislative considerations are also necessary to improve teachers' accessibility to teaching and learning materials, ensure the provision of diverse materials that meet students' needs and complement traditional teaching materials, promote Open Educational Resources and foster a copyright ecosystem that promotes the dissemination of knowledge, supports educational access, and safeguards intellectual property rights.



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Introduction

Background to the Study

This study focuses on accessing and using teaching and learning materials from a copyright perspective in Kenya. The aim was to examine the challenges faced by educators in accessing and using materials for teaching and learning, with a particular emphasis on copyright laws and their impact on educational practices. The study also aimed to contribute to evidence-based legislative reforms at the national, regional, and global levels.

The research questions addressed various aspects related to educators' autonomy in selecting teaching materials, their ability to supplement and adapt materials to meet diverse student needs, and the availability of additional research materials in libraries, particularly for higher education teachers. Furthermore, the study examined how current copyright legislation in Kenya supports cross-border teaching and learning needs in the digital era and whether these laws are designed in the interest of education as a public good, while ensuring educators' academic freedom.

The study sought to generate insights through surveys and focus group discussions to gather teachers' experiences regarding accessing and using teaching materials. It also aimed to identify barriers that hinder effective access and utilization of materials and provide an overview of the existing copyright exceptions and limitations for education in Kenya. The ultimate goal was to propose necessary reforms that would facilitate the use of materials for teaching and learning.

Throughout the research, a gender perspective was maintained, and other intersecting factors such as level of teaching, geographical location, forms of impairments, and equity issues were taken into consideration. The study intended to comprehensively understand how intellectual property regimes impact quality education, teaching, and other societal developments, struggles, and debates in the region and Kenya.

The Problem

While the role of copyright laws is to help protect the value of an author/academic/researcher's work and give them the ability to protect it from unlicensed or uncredited usage, it should also provide reasonable room for their audience to access and use those works. The absence of such balance has made it difficult for users to access and use copyrighted materials effectively. While there is an increasing number of legal reviews of copyright laws around the world, there needs to be more data on how teachers and researchers in diverse settings are working with materials and what challenges they face. This study sought to establish the impact of copyright laws on the access and use of teaching materials in Kenya, specifically examining the strategies used by teachers to

overcome the barriers they face in selecting, supplementing, and adapting materials for teaching and learning.

Purpose

This study aimed to investigate the access and use of teaching materials from a copyright perspective in Kenya, aiming to identify the challenges educators face and propose evidence-based reforms that promote equitable access to quality education while addressing copyright barriers.

Research Questions

- 1.** Do educators in Kenya have the autonomy to decide which materials to include in their teaching activities?
- 2.** Are educators able to supplement and adapt copyrighted materials to meet the needs of diverse students?
- 3.** Do higher education teachers have access to additional library research and materials?
- 4.** How well do current copyright legislation in Kenya support cross-border teaching and learning needs, particularly in the digital era?
- 5.** Are the copyright laws in Kenya designed in the interest of education as a public good and to guarantee academic freedom for educators to choose and adapt materials?
- 6.** Does the study contribute to evidence-based legislation for reforms at various levels?
- 7.** Does the study outcome strengthen equitable access to teaching, learning, and research materials?
- 8.** How do intellectual property regimes impact quality education, and teaching, and relate to other societal developments?



Objectives

There are two broad and six specific objectives. The main objectives of this study are to:

1. To gather experiences and examples of how teachers access and use materials for teaching and learning and what barriers they face in this regard through interviewing and surveying teachers in Kenya. 2. To provide a high-level overview of the current state of copyright exceptions and limitations for education in Kenya.

The specific objectives of the study are to:

- 1.** Analyze Section 26 of the Copyright Laws of Kenya;
- 2.** Determine the teaching and learning materials used in the classrooms;
- 3.** Establish the strategies used in accessing and using the teaching materials;
- 4.** Assess teachers' knowledge and awareness of copyright laws;
- 5.** Determine the challenges teachers encounter from a copyright perspective;
- 6.** Determine how teachers attempt to overcome the challenges encountered.

Literature review

Overview and Analysis of Section 26 of the Copyright Act of Kenya 2001

This section presents section 26 of the Kenya Copyright Act 2001 of Cap 130 of the Copyright Law of Kenya and its analysis. The section is titled "*Nature of copyright in literary, musical or artistic works and audio-visual works.*" The section has the following provisions:

- (1) *Copyright in a literary, musical or artistic work or audio-visual work shall be the exclusive right to control the doing in Kenya of any of the following acts, namely the reproduction in any material form of the original work or its translation or adaptation, the distribution to the public of the work by way of sale, rental, lease, hire, loan, importation or similar arrangement, and the communication to the public and the broadcasting of the whole work or a substantial part thereof, either in its original form or in any form recognisably derived from the original; but copyright in any such work shall not include the right to control—*
 - (a) *the doing of any of those acts by way of fair dealing for the purposes of scientific research, private use, criticism or review, or the reporting of current events subject to acknowledgment of the source;*
 - (b) *the reproduction and distribution of copies, or the inclusion in a film or broadcast, of an artistic work situated in a place where the public can view it;*
 - (c) *the incidental inclusion of an artistic work in a film or broadcast;*
 - (d) *the inclusion in a collection of literary or musical works of not more than two short passages from the work in question if the collection is designed for use in a school registered under the Education Act (Cap. 211) or any university established by or under any written law and includes an acknowledgment of the title and authorship of the work;*
 - (e) *the broadcasting of a work if the broadcast is intended to be used for purposes of systematic instructional activities;*
 - (f) *the reproduction of a broadcast referred to in the preceding paragraph and the use of that reproduction in a school registered under the Education Act (Cap. 211) or any university established by or under any written law for the systematic instructional activities of any such school or university;*
 - (g) *the reading or recitation in public or in a broadcast by one person of any reasonable extract from a published literary work if accompanied by a sufficient acknowledgment of the author;*
 - (h) *the reproduction of a work by or under the direction or control of the Government, or by such public libraries, non-commercial documentation centres, scientific institutions as may be prescribed, where the reproduction is in the public interest*



and no revenue is derived from that place;

- (i) *the reproduction of a work by or under the direction or control of a broadcasting authority where the reproduction or copies thereof are intended exclusively for broadcast by that broadcasting authority authorized by the copyright owner of the work and are destroyed before the end of the period of six calendar months immediately following the making of the reproduction or such longer period as may be agreed between the broadcasting authority and the owner of the relevant part of the copyright in the work; and any reproduction of a work made under this paragraph may, if it is of an exceptional documentary nature, be preserved in the archives of the broadcasting authority, but, subject to the provisions of this Act, shall not be used for broadcasting or for any other purpose without the consent of the owner of the relevant part of the copyright in the work;*
- (j) *the broadcasting of a literary, musical, or artistic work or audio-visual works already lawfully made accessible to the public with which no licensing body referred to under section 46 is concerned: Provided that subject to the provisions of this section, the owner of the broadcasting right in the work receives fair compensation determined, in the absence of agreement, by the competent authority appointed under section 48; and*
- (k) *any use made of a work for the purpose of a judicial proceeding or of any report of any such proceeding.*

Analysis

Beginning with the title of the subsection, the aspect of education, teaching, research, or learning is invisible. This may imply that the primary purpose of the subsection is for the creators of *“literary, musical or artistic works and audio-visual works.”*

The section provides *“the exclusive right of creators/authors to control”* their work which comprises *“(reproduction, translation, distribution, communication to the public, and broadcasting).”*

The law uses legal (or jargon) language such as *“the doing of any of those acts by way of fair dealing...”*; *“exceptions to the exclusive control of reproduction, translation, distribution, communication to the public, and broadcasting”* is subtly introduced in the text without a heading. This almost obscures the exceptions or fair dealing concerning teaching and learning activities. For instance, the use of statements such as *“... but copyright in any such work shall not include the right to control—*

- (a) the doing of any of those acts by way of fair dealing for the purposes of scientific research, private use, criticism or review, or the reporting of current events subject to acknowledgment of the source.”*

This kind of language may need to be understood by the target audience, such as teachers and librarians, who are the key stakeholders in the education sector and the implementers of the same law.

As it were, reference to education in the law is only implied in the following subsection: (a) - "*scientific research*;" (d) - "*...if the collection is designed for use in a school registered under the Education Act (Cap. 211) or any university established by or under any written law...*;" (f) - "*... use of that reproduction in a school registered under the Education Act (Cap. 211) or any university established by or under any written law for the systematic instructional activities of any such school or university*;" and (h) - "*... scientific institutions as may be prescribed...*". These parts of the law could be subjected to different interpretations, by different users for different reasons, thereby either defeating the purpose of the law or limiting its effectiveness.

Further, the prescription of the exception provided for in subsection (d) is rather too brief for educational purposes—

(d) the inclusion in a collection of literary or musical works of not more than two short passages from the work in question if the collection is designed for use in a school registered under the Education Act (Cap. 211) or any university established by or under any written law and includes an acknowledgment of the title and authorship of the work;

Previous Reviews

Previous reviews of the Copyright laws of Kenya and other copyright regimes also raised similar sentiments. For instance, Henderson et al. (2019) pointed out limited provisions and exceptions within the copyright law that allow for the use of copyrighted materials in an educational context as a major challenge. They further asserted that teachers heavily relied on various resources, including textbooks, articles, and multimedia materials, to enhance their teaching and provide valuable information to their students. However, these limited provisions in the copyright laws can limit the availability and accessibility of teaching and learning resources. On the same note, Mathangani and Otike (2017) highlight that, although Section 26 of the Kenyan Copyright Law allows for reproducing copyrighted materials for educational use, there could be ambiguity and uncertainty in the same.

On fair dealing, Wahid et al. (2018) point to the difficulties in interpreting copyright laws, such as determining what constitutes fair dealing for educational use and the requirement to clear copyright for using digital resources, which can further complicate the situation. The limited scope of fair dealing in Kenyan copyright law means that teachers may have to rely heavily on permissions and licenses from copyright owners to use materials.

On the international scene, studies conducted in Japan and Malaysia by Wahid et al. (2018), highlight the difficulties in interpreting and applying copyright laws, specifically about fair dealing for educational purposes. Similarly, a study by Cancilla et al. (2017) highlights how copyright law shapes universities and colleges, creating organizational inertia and countervailing interests that hinder efficient sharing of electronic scholarly materials with students. These impediments restrict educational institutions' ability to use technology to deliver instructions and providing low-cost instructional materials to students. According to Jia (2022), the result of this situation results in teachers facing obstacles in accessing and utilizing teaching and learning information resources. These obstacles limit the educational opportunities available to teachers (Vien et al., 2019).



Access to Classroom Teaching and Learning Materials

The literature review provides valuable insights into the significance of access to teaching and learning materials in Kenyan classrooms. According to Oppong (2021) access to teaching and learning materials including textbooks, workbooks, handouts, and audiovisual resources, plays a crucial role in providing quality education. These materials are, however, subject to copyright laws in Kenya, which grant authors exclusive rights over their use, reproduction, and distribution (Oppong, 2021). These laws pose challenges to accessing and using these materials. It is, therefore important for teachers to be aware of the legal provisions to navigate copyright regulations effectively, especially regarding accessing and using teaching and learning materials (Armstrong & De Beer, 2010). Literature also reveals that limited access to such materials has a direct impact on the quality of education provided, with teachers often relying on outdated or insufficient resources, resulting in lower student engagement and achievement (Kiru, 2019; Schonwetter, De Beer, Kawooya & Prabhala, 2010). This situation, therefore, raises the need for an interrogation of the copyright situation in the education sector in Kenya.

Strategies Used to Access Copyright-protected Teaching and Learning Materials

The review also sheds light on the strategies employed by teachers to overcome the barriers posed by copyright-protected materials. They employ various strategies, including utilizing alternative print-based resources through the internet and licensed materials, creating their own original content, utilizing open educational resources (OER), and obtaining permission from copyright owners directly (Abeywardena et al., 2013; Cohen, 2005; Fishman, 2023; Hobbs, 2010; Hobbs, 2019; Kapitzke et al., 2011; Shukla et al, 2022; Krelja, 2016). These strategies provide teachers with avenues to access and use a wide range of materials while navigating around and respecting copyright regulations.

Teachers' Knowledge and Awareness of Copyright Laws

An important finding from previous studies is that many teachers in Kenya have limited knowledge of copyright laws and have yet to receive formal training on the subject (Mathangani & Otike, 2010; Olaka & Adkins, 2012). This lack of awareness puts teachers at risk of unintended copyright violations, which may have legal and reputational implications with teachers being unaware of the potential consequences, such as legal action and reputational damage (Mathangani, & Otike, 2018; Olaka, 2010; Olaka & Adkins, 2012). To avoid these situations, an assessment of Kenyan teachers' knowledge and awareness of copyright laws becomes crucial to this study, to contribute to legislative and policy reforms.

Challenges Faced by Teachers from a Copyright Perspective

Existing literature also highlights the copyright-related challenges faced by teachers about copyright laws. These challenges include difficulties in understanding the scope and limitations of fair dealing provisions, limited access to licensed digital content, lack of guidance and support, confusion over copyright ownership, and financial constraints in obtaining licenses or permissions (Hobbs, 2010; 2019). These challenges can have negative implications for the quality of education provided, as they hinder teachers' ability to prepare effective lessons, provide diverse resources and effectively engage students.

Strategies for Overcoming Copyright-related Challenges

The literature suggests several strategies used to address these challenges. For instance, the University of Nairobi has its own copyright policies to balance the protection of intellectual property with the need for access to teaching materials (University of Nairobi, 2013). Similarly, Creative-Commons licenses offer alternative ways to access and use materials without cost (Kapitzke et al., 2011; Lamlert, 2014). On the same note, the Kenya Institute of Curriculum Development (KICD) promotes the use of open educational resources (OER) to provide teachers with diverse materials at no fee (KICD, 2021). Collaboration among teachers through resource sharing is also encouraged (Charbonneau, & Priehs, 2014; Ganapathi, 2018; Kapitzke et al., 2011; Lamlert, 2014; Pounds, & Bostock, 2019). This helps to minimize the effects of a lack of resources, which can also affect the quality of knowledge shared with students. Collaboration among teachers through resource sharing should therefore, be encouraged so as to overcome some of the challenges.

Scope

The study explored the access, use, awareness, challenges, and strategies related to copyright laws and access to teaching and learning materials in Kenyan classrooms. The 107 participants were drawn from public primary, secondary, as well as tertiary teachers, drawn from all the counties in Kenya. The study examined the teachers' level of access and use of educational materials, their knowledge of copyright regulations, the difficulties they face in accessing materials, and the strategies they employed to overcome copyright-related barriers. The study further explored the implications of copyright laws on the quality of education and proposed recommendations to enhance teachers' access to diverse resources, while ensuring compliance with copyright regulations.



Methodology

Mixed Methods Approach and Study Design Methodology

A mixed methods approach was employed in this study, combining quantitative and qualitative data collection and analysis. The purpose was to enhance understanding by examining convergences, divergences, and complementarities between the two data sets. The quantitative data were analyzed separately, as were the qualitative data. Finally, the findings were compared to comprehensively understand the research problem (Creswell, 2013 a & b; Hesse-Biber, 2015).

Research Design

The study adopted a convergent parallel research design, which integrates quantitative and qualitative research techniques. This design leverages the strengths of both approaches to provide a more robust understanding of the research topic. The quantitative strand allows for generalization, while the qualitative strand captures respondents' perspectives and contextual explanatory factors. Combining both methods gives a more comprehensive understanding of the problem (Creswell, 2013a & b; Omona, 2013; Razali, et al., 2019; Hesse-Biber, 2015).

Data Collection Methods and Tools

Two data collection instruments were used: an online semi-structured questionnaire and focus group discussions. The questionnaire, administered via Google Forms, covered various aspects such as experiences of teaching students outside Kenya, access to and use of various teaching materials, knowledge of copyright laws, copyright-related challenges and ways of dealing with the challenges. The focus group discussions provided a platform for primary-level teachers to share their experiences on the same aspects and complement the survey data. Based on Mugenda and Mugenda (1999), the focus group discussions were organized based on geographical location (urban/rural) and where applicable, taking into account specific impairments.

Sampling

To ensure a diverse sample, a strategy similar to the stratified purposive sampling techniques were employed. Teachers were first stratified into primary, secondary, and tertiary levels, and further stratified by geographical location (urban or rural) and specific categories of impairments. The researchers collaborated with union leaders, who helped to select participants from each region and category. Purposive sampling was used to

select specific participants, such as teachers with different forms of impairment, and teachers from the marginalized regions of the country, such as Tana River and Garissa. The aim was to include teachers from all 47 counties, with at least five participants from each region and category, amounting to approximately 10% representation from each category (Sharp et al., 2012; Mugenda & Mugenda, 1999).

Participants

The study included 107 teachers from three educational levels in Kenya: primary, secondary, and tertiary education, drawn from all 47 counties. According to the Ministry of Education (2023), there are 31200 primary schools, 1250 secondary schools, 2348 colleges and, 74 universities in Kenya. Out of the 31200 primary schools, 23286 are public, while 37 of the 74 universities are public. Due to time constraints, a minimum of 10% sample of teachers was selected to represent each category (Mugenda & Mugenda, 2009). The majority of the respondents in the survey were from higher education levels, including Technical and Vocational Education Training, middle-level colleges, and universities, followed by secondary-level teachers, who participated in both the survey and FGDs (Focus group discussions). The total number of respondents in the survey was 80 (n=80). The primary school teachers mainly participated in focus group discussions, apart from a few, especially those with hearing impairments, who participated in the survey. A total of 27 teachers from across the country participated in the focus group discussions (n=27). The purpose was to ensure inclusivity and effective participation by all groups.

In the survey, in terms of gender distribution, 57.5% of participants were male, while 42.5% were female. There were 15 male and 12 female participants in the focus group discussion of the level of teaching; in the survey, the highest representation was from the higher education level (28.7%), followed by universities and secondary education (27.5% each), special education (12.5%), and primary education (3.8%).

Based on the county of teaching in the survey, Nairobi County had the highest representation (35.0%), while Uasin Gishu had the lowest representation (2.5%). Other counties included Migori, Mombasa, Busia, and Vihiga. Additionally, (Mt Kenya region) was included as Dedan Kimathi University of Technology (DeKUT) was one of the sampled universities. The counties represented in the FGDs were Kiambu, Nyandarua, Taita Taveta, Kwale, Kakamega, Busia, Mombasa, Kwale, Nairobi, Kilifi, Tana River, Kisii, Garissa and Machakos.

Analysis

The data analysis in this study involved the analysis of quantitative survey data and focus group discussion responses. The surveys were analyzed using SPSS (version 26), while the focus group discussion transcripts were analyzed using MAXQDA 22. The analysis was conducted sequentially, starting with the quantitative analysis, where descriptive frequencies were calculated, and the data was summarized using tables and bar charts as outputs. The qualitative data was analyzed through content and thematic analysis.



To ensure a comprehensive analysis, the quantitative and qualitative findings were compared and integrated, while checking for either convergence, divergence or complementarity of the data sets in each question. This comparison helped uncover insights and provided more nuanced understanding of the data. The results of the study were presented in accordance with topics derived from the objectives as stated by Cresswell (2013a; 2013b). The results of the analysis are presented in the next section.

Results

Introduction

This section presents the results obtained through surveys and focus groups. Data for the survey questions were analyzed quantitatively using frequency tables with the help of SPSS v26. The use of MAXQDA v20 helped to summarize textual data and to generate excerpts from focus group discussion participants. The section was divided into six subsections, each representing the six objectives of the study or research questions, i.e., teaching students beyond Kenyan borders; access and use of teaching and learning materials; strategies used in accessing and using the teaching materials; assessment of teachers' knowledge of copyright laws; challenges teachers experience while accessing copyright protected teaching and learning materials and teachers' attempts to overcome the challenges to access and use teaching and learning materials.

Teaching Students beyond Kenyan Borders

This was an open-ended question, where respondents were asked to indicate the specific teaching modes they used when teaching students in different countries, stated as *"If you are teaching students located in different countries, please specify the specific modes of teaching you use when teaching them."*

The findings shown in Figure 1 indicated that the majority of the respondents (47, or 58.75%) reported that the question was not applicable to them, 28 respondents (35%) reported using online means, and while only 5 participants (6.25%) reported using blended the mode of teaching. This could suggest that the majority of Kenyan teachers were either, not engaged in any teaching beyond Kenyan borders or they make limited use of online means of teaching.

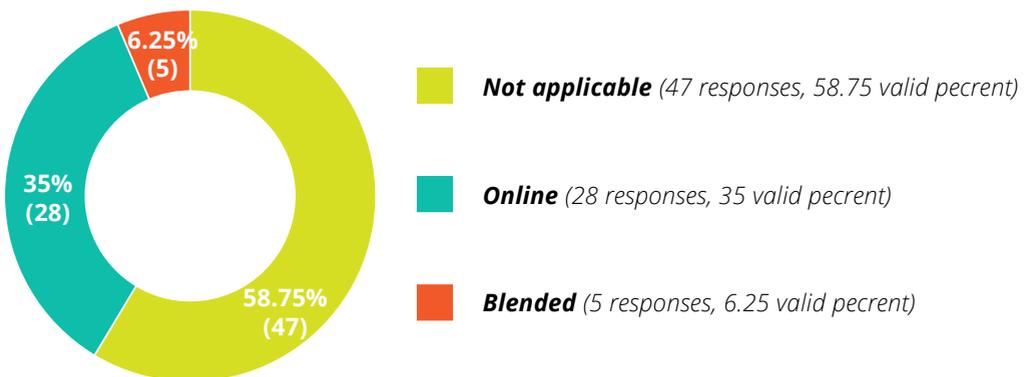


Figure 1. Teaching Students beyond Kenyan Borders

Types of materials used for teaching and learning

In this section, we sought to better understand what types of materials teachers mostly use for teaching and learning activities. We asked teachers how frequently they use traditional educational materials specifically created for teaching and learning (e.g. school textbooks, worksheets, course manuals, journals), on the one hand, and other materials that complement traditional materials (e.g., images from google searches, YouTube videos, newspaper articles, poetry, literature, Wikimedia articles, and research papers), on the other.

The following table (Table 3.1) shows an overview of the different materials that teachers that participated in the focus groups use for teaching and learning. The content analysis revealed that charts were the most cited (9), followed by videos (5), textbooks (5), environment (4), and pictures (3), among others, as listed in the table. Interestingly, dictionaries and office readers had 1 mention each. This list complements the teaching materials covered in the literature and measured through the survey. These results will be presented in the following sections.

Table 3.1. Additional Teaching and Learning Materials Used by Teachers.

<i>Material and No of Mentions</i>	<i>Material and No of Mentions</i>	<i>Material and No of Mentions</i>
<i>Charts</i> x9	<i>Computers</i> x2	<i>Tools</i> x1
<i>Videos</i> x5	<i>Braille</i> x1	<i>Models</i> x1
<i>Textbooks</i> x5	<i>Concrete objects</i> x?	<i>Movies</i> x1
<i>Environment</i> x4	<i>Course books</i> x1	<i>Multimedia</i> x1
<i>Pictures</i> x3	<i>Dictionary</i> x1	<i>Office readers</i> x1
<i>Realia</i> x3	<i>Dot minis</i> x1	<i>Online</i> x1
<i>Digital materials</i> x2	<i>Drawings</i> x1	<i>Real objects</i> x1
<i>Flashcards</i> x2	<i>Graphics</i> x1	<i>Regalia</i> x1
<i>Lesson plan</i> x2	<i>Illustrations</i> x1	<i>Seedlings of seeds</i> x1
<i>Photographs</i> x2	<i>Interactive materials</i> x1	<i>Tablets</i> x1
<i>Reference books</i> x2	<i>Knitting yarn</i> x1	<i>Workbooks</i> x1
<i>Scheme of work</i> x2	<i>Magnates</i> x1	
<i>Supplementary materials</i> x2	<i>Manila papers</i> x1	
<i>Teaching aids</i> x2	<i>Maps</i> x2	
<i>Audio-visual</i> x1	<i>Tapestry</i> x1	

1. Materials specifically created for teaching and learning

a) Printed/non-digital Versions of Commercial (recommended) Teaching Materials

Table 3.2 summarizes statistics for access and use of printed/non-digital versions of commercial teaching materials. Half of the respondents (40 respondents) had access to printed/non-digital and commercial (recommended) teaching materials at the frequency of “*almost every day*,” while a quarter (20 respondents) did at the frequency of “*every day*.” This finding suggests that Kenyan teachers are more likely to use (recommended) printed/non-digital versions of commercial teaching materials in the classrooms.

Table 3.2. Use of printed/non-digital and commercial educational materials

Responses	Frequency	Percent	Valid Percent
<i>Everyday</i>	20	25.0	25.0
<i>Almost everyday</i>	40	50.0	50.0
<i>Most frequently</i>	1	1.3	1.3
<i>Frequently</i>	3	3.8	3.8
<i>Sometimes</i>	14	17.5	17.5
<i>Almost never</i>	1	1.3	1.3
<i>Never</i>	1	1.3	1.3
Total	80	100.0	100.0

b) Digital Versions of Commercial Teaching Materials

Table 3.3 summarizes statistics for access and use of digital versions of commercial teaching materials (these include digital textbooks, course books, worksheets, course manuals, journals, audiovisual material, and documentary support). Notably, 58% (47 respondents) had access to digital versions of commercial teaching materials at the frequency of “*sometimes*,” while 20% (16 respondents) had access to these materials almost every day. These findings indicate that more than a quarter of teachers use digital versions of commercial teaching materials on a daily basis.

**Table 3.3. Use of Digital Versions of Commercial Teaching Materials**

<i>Responses</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Everyday</i>	5	6.3	6.3
<i>Almost everyday</i>	16	20.0	20.0
<i>Most frequently</i>	2	2.5	2.5
<i>Sometimes</i>	47	58.8	58.8
<i>Almost never</i>	5	6.3	6.3
<i>Never</i>	8	10.2	10.2
Total	80	100.0	100.0

c) Digital Versions of Freely Available Teaching Materials

Table 3.4 shows a breakdown of access levels to digital versions of teaching materials that are accessible online free of charge (these include databases with open educational resources, materials shared by other teachers on online platforms or websites). Notably, 60% (48 respondents) had access to freely available online materials sometimes, while 17.5% percent (14 respondents) had access to these materials almost every day and 5% (4 respondents) use it every day. These findings show that open educational resources and other teaching materials that are freely available online play an important role in day-to-day teaching in Kenya.

Table 3.4. Use of Digital Versions of Freely Available Teaching Materials

<i>Responses</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Everyday</i>	4	5.0	5.0
<i>Almost everyday</i>	14	17.5	17.5
<i>Most frequently</i>	1	1.3	1.3
<i>Frequently</i>	1	1.3	1.3
<i>Sometimes</i>	48	60.0	60.0
<i>Almost never</i>	10	12.5	12.5
<i>Never</i>	2	2.6	2.6
Total	80	100.0	100.0

2. Other materials that teachers use to complement traditional educational materials

a) Open-access Research Papers

Table 3.5 shows the findings on access to and use of open-access research papers available online on free-of-charge platforms (e.g. open-access repositories). The findings show that a quarter of respondents frequently use open-access research papers (20% almost daily and 7.5% daily). Half of respondents reported accessing them sometimes, while 5% never used them. These results show the importance of open-access research papers for the majority of respondents.

Table 3.5. Use of open-access Research Papers

Responses	Frequency	Percent	Valid Percent
Everyday	6	7.5	7.5
Almost everyday	16	20.0	20.0
Frequently	2	2.5	2.5
Sometimes	42	52.5	52.5
Almost never	11	13.8	13.8
Never	3	3.6	3.6
Total	80	100.0	100.0

b) Subscribed Copyrighted Research Papers

Table 3.6 also shows limited access to and use of copyright-protected research papers that can be accessed online upon payment (e.g., subscription-based commercial journals), as 45% (36 respondents) accessed "*sometimes*," while 26.3% (21 respondents) "*almost never*" accessed them, and the same number of respondents indicated that they "*never*" access these materials. This indicates a low frequency of access and use of copyrighted research papers that imply payments and suggests that teachers prefer using open-access papers as seen in Table 3.5.

Table 3.6. Use of subscribed Copyrighted Research papers

Responses	Frequency	Percent	Valid Percent
<i>Everyday</i>	4	5.0	5.0
<i>Almost everyday</i>	7	8.7	8.7
<i>Frequently</i>	2	2.5	2.5
<i>Sometimes</i>	36	45.0	45.0
<i>Almost never</i>	21	26.3	26.3
<i>Never</i>	21	26.3	26.3
<i>Not aware</i>	1	1.2	1.3
Total	80	100.0	100.0

c) Printed (non-fiction) Materials

Table 3.7 shows that 56.3 percent (45 respondents) used books at the frequency of "*sometimes*," 15.0 percent (12 respondents) used books at the frequency of "*almost every day*," while only 10% reported using them "*every day*." The findings revealed limited use of printed books (non-fiction materials), which are not explicitly created for educational purposes.

Table 3.7. Use of printed (non-fiction) materials

Responses	Frequency	Percent	Valid Percent
<i>Everyday</i>	8	10.0	10.0
<i>Almost everyday</i>	12	15.0	15.0
<i>Most frequently</i>	1	1.3	1.3
<i>Frequently</i>	2	2.5	2.5
<i>Sometimes</i>	45	56.3	56.3
<i>Almost never</i>	8	10.0	10.0
<i>Never</i>	4	5.1	5.1
Total	80	100.0	100.0

The focus group discussion findings on materials used for classroom teaching and learning complemented the findings on printed materials that teachers use. Teachers with learners with intellectual impairment, for instance, mentioned using materials such as textbooks, reference books, workbooks, and supplementary reading materials. Therefore, the findings from the two sets of data indicate the limited use of printed books (non-fiction materials), which are not explicitly created for educational purposes by teachers in Kenya.

These findings could indicate that Kenyan teachers may not easily supplement the recommended teaching materials with other available materials, limiting their ability to provide quality education to their learners. This could also affect their participation in cross-border teaching and learning.

d) Recorded Copyright-protected Material

Table 3.8 summarizes statistics for using recorded copyright-protected materials (films, music, TV programs, and other audio-visual materials). Almost half of the participants (39 respondents) used recorded copyright-protected materials at the frequency of “*sometimes*.”, a quarter (20 respondents) at the frequency of “*almost never*” and 10.1 percent (8 respondents) at the frequency of “*never*.” This finding suggests that teachers depend less on recorded copyright-protected materials for classroom teaching and learning.

Table 3.8. Use of Recorded Copyright-protected Material

<i>Responses</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Everyday</i>	4	5.0	5.0
<i>Almost everyday</i>	8	10.0	10.0
<i>Most frequently</i>	1	1.3	1.3
<i>Sometimes</i>	39	48.8	48.8
<i>Almost never</i>	20	25.0	25.0
<i>Never</i>	8	10.1	10.1
Total	80	100.0	100.0

In the focus group discussions, teachers mentioned using multimedia materials, including videos, computers, and smartphones, to support their students' learning. In the group with learners with intellectual impairment, for instance, one teacher stated, “...*there are times we are told to use video clips; we use the computers, the smartphones to show them those videos*,” while another referred to “*using the digital materials*.” The Mixed Focus Group Discussion (whose participants comprised teachers of learners with and without disabilities) did also mention using online resources, such as pictures downloaded from the internet.

Therefore, quantitative and qualitative findings indicate limited use and collaboration on using recorded copyright-protected material (films, music, TV programs, and other audio-visual materials) in classroom teaching and learning. This may also imply minimal supplementary use of teaching materials beyond the recommended teaching and learning materials. Further research is required to determine why this is the case.



e) Copyright-protected Materials Freely Available Online

Table 3.9 summarizes statistics for using copyright-protected digital materials that are available online on free-of-charge platforms (e.g., YouTube videos, images from Google search results, and Wikipedia). The findings show that 51.2% (41 respondents) used copyright-protected materials that are freely available online at the frequency of “*sometimes*,” 20% (20 respondents) used them at the frequency of “*almost every day*,” while 8.8% (7 respondents) used them every day. These findings suggest that copyright-protected materials that are accessible on free-of-charge platforms have a significant impact in classroom teaching and learning.

Table 3.9. Use of Copyright-protected Materials Freely Available Online

Responses	Frequency	Percent	Valid Percent
<i>Everyday</i>	7	8.8	8.8
<i>Almost everyday</i>	16	20.0	20.0
<i>Most frequently</i>	1	1.3	1.3
<i>Sometimes</i>	41	51.2	51.2
<i>Almost never</i>	7	8.8	8.8
<i>Never</i>	8	10.1	10.1
Total	80	100.0	100.0

f) Copyrighted Digital Newspapers

Table 3.10. indicates the frequency of use of copyrighted digital newspapers, which include paid online newspaper articles and images from paid image banks, as follows: “*sometimes*” had 50 percent (40 respondents), “*almost every day*” had 18.8 percent (15 respondents), combination of “*frequently*” and “*every day*” had 9 percent (7 respondents), while “*never*” had 15 percent (12 respondents). These findings indicate limited use of copyrighted digital newspapers for classroom teaching purposes.

Table 3.10. Use of Copyright-protected Digital Newspapers

Responses	Frequency	Percent	Valid Percent
<i>Everyday</i>	6	7.5	7.5
<i>Almost everyday</i>	15	18.8	18.8
<i>Frequently</i>	1	1.3	1.3
<i>Sometimes</i>	40	50.0	50.0
<i>Almost never</i>	6	7.5	7.5
<i>Never</i>	12	15	15
Total	80	100.0	100.0

A focus group participant from among teachers dealing with learners with intellectual impairments, for instance, stated, *"ICT materials ni (is) very important kwa (for) people with special needs"* and further added, *"huwa tunawaonyesha hizo (we usually show them those brief) clips wanafuutilizia (they follow)"*. In this caption, spoken in both English and Swahili languages, the participant emphasizes the need for using digital materials when teaching learners with intellectual impairments and explains how they show them short clips adding that they are easy to follow.

The Extent of Use of Copyrighted Materials in Teaching and Learning

The findings in this section show how teachers use literary and artistic creations protected by copyright in a variety of teaching and learning activities: in the classroom, in student examinations, and in complementary activities.

a) When using copyrighted materials in student examinations

Table 3.11 summarizes the survey of how teachers use copyrighted material in students' examinations. The findings show that 46.3% (37 respondents) reported *"I always use the entire copyright-protected material regardless of whether it is a large or short work"*, 26.2% (21 respondents) reported *"I do not use copyright-protected materials for student examinations"*, 17.5% (14 respondents) reported *"I almost always use parts of copyright-protected materials, however, if the material is short, I use it all."*

Table 3.11. Using Copyrighted Materials in Student Examinations

Responses	Frequency	Percent	Valid Percent
<i>I almost always use parts of copyright-protected materials. However, if the material is a short work, I use all of it</i>	14	17.5	17.5
<i>I always use the entire copyright-protected material regardless of whether it is an extensive or short work</i>	37	46.3	46.3
<i>I do not use copyright-protected materials for student examinations</i>	21	26.2	26.3
<i>I don't know</i>	7	8.8	8.8
<i>I use part of copyright-protected materials</i>	1	1.2	1.3
Total	80	100.0	100.0



b) When showing/displaying copyrighted materials in class

Table 3.12 summarizes the survey on the extent of showing or displaying copyright-protected materials in the classroom (in-person or during an online presentation). The findings are as follows: 31.3 % (25 participants) reported, "*I usually use parts of copyright-protected usually display materials. However, if the material is a short work, I use the entire material*"; 28.7 % (23 participants) reported "*I only display parts of copyright-protected materials*"; 23.8 % (19 participants) reported "*I do not display copyright-protected materials in class*"; 8.8 percent (7 participants) reported, "*I display the entire material.*" The finding indicates that most teachers used parts of the copyright-protected teaching material. This is a restrained approach to displaying or showing copyright-protected materials.

Table 3.12. Showing/displaying Copyright Materials in Class

Responses	Frequency	Percent	Valid Percent
I display the entire material	7	8.8	8.8
I do not display copyright-protected materials in class	19	23.8	32.5
I don't know	6	7.5	40.0
I only display parts of copyright-protected materials	23	28.7	68.8
I usually use parts of copyright-protected usually display materials. However, if the material is a short work. I use the entire material	25	31.3	100.0
Total	80	100.0	100.0

c) When Sharing copyrighted material with students

Table 3.13 shows how much of the work is used by teachers when sharing digital versions of copyright-protected materials with students to complement actual teaching. Over half of the participants (42 respondents) reported: "*I share the entire material*", 22.5 % (18 respondents) reported "*I usually share parts of copyright-protected materials, however, if the material is a short work (e.g., a short poem) or an image (e.g., a photograph), I share the entire material*", while 20 % (16 respondents) reported "*I do not share copyright-protected materials with students*". Only 5 % (4 respondents) reported "*I don't know.*"

Table 3.13. Sharing Digital Copyright Materials with Students

Responses	Frequency	Percent	Valid Percent
<i>I do not share copyright-protected materials with students</i>	16	20.0	20.0
<i>I don't know</i>	4	5.0	5.0
<i>I share the entire material</i>	42	52.5	52.5
<i>I usually share parts of copyright-protected materials. However, if the material is a short work (e.g., a short poem) or an image (e.g., a photograph), I share the entire material</i>	18	22.5	22.5
Total	80	100.0	100.0

Additionally, findings from the focus group discussions indicated that teachers dealing with learners with intellectual impairments, for instance, needed to share more content to create understanding among the learners. One teacher from this group, for instance, shared, *"ICT materials ni (is) very important kwa (for) people with special needs."* Another teacher stated that *"there are times we are told to use video clips because the learners with MH mostly are motivated when they can watch and see"*. These statements could mean that the teachers may be compelled to share all contents with learners in this category to enhance effective teaching, learning, and understanding of concepts. Therefore, the two sets of data converge in revealing that Kenyan teachers shared ample portions of digital copyright-protected materials with students. This would then draw our attention to Kenya's copyright laws and exceptions.

Strategies Used to Access Teaching & Learning Materials

This subsection assesses strategies used to access teaching and learning materials. Responses to an open-ended survey question are summarized in Table 3.13. Similarly, Focus Group Discussion responses in the form of excerpts and direct quotations are provided to collaborate with the survey question.

What teachers do if do not have access to teaching and learning materials

Table 3.14 shows a summary of responses by teachers to an open question about what they will do if they do not have access to teaching and learning materials. Content analysis was applied to determine emerging themes with percentages of scores, if they did not have access to teaching and learning materials. 36 per cent of participants (29 respondents) stated that they would do nothing, over a third (27 respondents) stated they would look for alternative sources, about 13% (10 respondents) said they would improvise, around 4% (3 respondents) stated that they would use local materials, while 2 per cent



(2 respondents) noted that they would give extra work. The question was deemed as not applicable by 9 per cent of participants (7 respondents) and a further 2% said that they had never faced this problem. Although most teachers would do nothing, a combination of those considering alternative sources, improvising, and using local materials forms 63.8 per cent. This also indicates that teachers can use alternative sources if given options. See Table 3.13 and the corresponding Figure 3.2, giving a visual representation of the options.

Table 3.14. What Teachers do if they cannot Access Teaching and Learning Materials

Responses	Frequency	Percent	Valid Percent
<i>Do nothing</i>	29	36	36
<i>Look for alternative sources</i>	27	34	34
<i>Give extra work</i>	2	2	2
<i>Never faced this problem</i>	2	2	2
<i>Improvise</i>	10	13	13
<i>Use of local material</i>	3	4	4
<i>Not Applicable</i>	7	9	9
Total	80	100.0	100.0

A summary of Focus Group Discussion responses corroborates with some identified survey themes. The improvisation theme for example, featured in the Focus Group Discussions with some teachers with learners with intellectual impairments sharing as follows; *"we got the materials from the environment"*, *"we can have charts by using manila sheets," "we take the lollipop sticks or biro tubes, we cut them into small pieces to do beadwork, and, as they are picking them, they are owning them..."*, *"we can improvise"*, among others. Moreover, the Focus Group conducted with teachers with learners without impairments and another group with learners with visual impairments shared as follows; *"...can be made-- improvised from the local materials," "getting them from locally available materials," "we improvise a lot using the locally available materials,"* among others.

In the Focus Group Discussion conducted with teachers with learners without impairments and working in urban areas, some teachers shared that; *"... we can have charts using manila sheets," "...can be made-- improvised from the local materials,"* among others.

Another emerging theme closely related to improvisation arising from Focus Group Discussions was adaptations. Teachers with learners with intellectual impairments for instance shared that; *"we can develop the materials according to the levels of the children..."*, *"if there is an activity maybe or an item the learners are supposed to make, we normally demonstrate it for them, and then they come up with their own through practice and observation...., among others."*

Similarly, teachers with learners with intellectual impairments shared also shared that; *"... for our learners to be able to access them or even our teachers-- for them to be able to access them, we need to put in place some adaptations, yes, we need to put in place some adaptations to suit the needs of our learners."*

Improvisation and adaptation are essential strategies Kenyan teachers use in accessing materials, especially for students with various impairments. With improvisation standing out as a common strategy, this could indicate either the unavailability of the required materials or the availability of autonomy for teachers to choose alternative materials to use for teaching. It would be necessary to determine teachers' criteria for improvisation strategies.

Knowledge of Copyright Laws and Impact on Access to Teaching and Learning Materials

The following findings aim to answer the question, *"How familiar are you with copyright laws regarding accessing and using copyright-protected teaching and learning materials?"*

Table 3.15 summarizes responses that best describe their knowledge level of copyright. The respondents' familiarity with the copyright laws varies widely. The majority fall into the categories of *"somewhat familiar"* (47.5%) and *"familiar"* (23.8%). A smaller portion are *"very familiar"* (16.4%), and there are also respondents who are *"not familiar at all"* (8.8%), *"not aware"* (2.5%), or *"somehow not aware"* (2.5%).

Table 3.15. Familiarity with Copyright Laws

Responses	Frequency	Percent	Valid Percent
<i>I am familiar</i>	19	23.8	36
<i>I am not aware</i>	2	2.5	34
<i>I am somehow not aware</i>	2	2.5	2
<i>I am not familiar at all</i>	7	8.8	2
<i>I am somewhat familiar</i>	38	47.5	13
<i>I am very familiar</i>	13	16.4	4
Total	80	100.0	100.0

The corroborating findings from qualitative data indicate that most participants were somewhat aware of copyright laws, just like in the survey where, majority of respondents fell into the *"somewhat familiar"* It is also worth noting that, just like in the survey, where a total of 11 respondents were either not aware, somehow not aware or not familiar at all, there were indications of some teachers not being aware of the laws. The following were some excerpts by teachers participating in the Focus Group Discussions.



Teachers with learners with intellectual impairments and with some copyright knowledge for instance shared; *“by copyright, there are some instances whereby someone tends to reproduce somebody’s work without acknowledgement or without maybe without the owner’s consent”, “the reproductions of a material that was produced by somebody else somewhere or rather you do something similar without authorization”, “publication or performances and displaying the same without the permission of the-- author rather”,* among others.

Teachers with learners without impairments shared; *“there was a copyright act published in 2001, I do not know whether you know about that, that one is the one that protects the copyright-related, maybe infringement and maybe enforcement, either written or sung or anything....”, “I...not experienced much copyright, but I think taking somebody’s material without permission is a crime”.*

Teachers with learners without intellectual impairment, who had no adequate knowledge stated; *“surely, I do not know any copyright law and whatever”, “... I have no idea, surely”.*

A teacher with mixed groups of learners shared, *“I do not know much about the laws, although in my case, we do not rely so much on the written materials”.*

The Focus Group Discussion quotes and the summary of survey responses converge by corroborating and reinforcing each group’s findings. Teachers mostly know about the copyright laws, the details notwithstanding.

Copyright-related Challenges

Table 3.16 shows the summary of challenges teachers experienced related to copyright laws. Over a third of teachers (29 respondents) experienced uncertainty. Slightly more than a third (31 respondents) experienced limited permission for use. Almost a fifth (15 respondents) experienced prohibitive costs. Notably, only 2.5% (2 respondents) said that they have never faced any copyright-related issues.

Table 3.16. Copyright-related Challenges

Responses	Frequency	Percent	Valid Percent
<i>I have not faced any copyright-related issues</i>	2	2.5	2.5
<i>Limited permission for use</i>	31	38.8	38.8
<i>Prohibitive costs</i>	15	18.8	18.8
<i>Some materials are unavailable</i>	1	1.3	1.3
<i>Uncertainty</i>	29	36.3	36.3
Total	80	100.0	100.0

Focus group discussion findings reflected more on financial costs, which is directly related to prohibitive costs as one of the outstanding factors in the survey, i.e., 18.8 per cent (15 respondents). The following are some of the excerpts related to prohibitive costs.

Teachers with learners with intellectual impairments had the following experiences as quoted; *"now, the challenge goes to the copyright laws and materials, when retrieving these materials-- needs some finances to retrieve the same materials from the website", "... the finances that are the availability of the finances since it is not a material you own." "... lack of the resources, resources, in this case, I talk about money, maybe you want to download something, and you do not have the data".*

Teachers with learners without impairments and working in urban areas shared; *"it is also becoming costly to retrieve some information. A participant shared that, "some people will charge you money and then you have to use money, so for those, when retrieving some information, it is expensive, you need money, and that is also a challenge".* The same participant added, *"It is costly for teachers to access material, and in fact, the bloggers make these materials so expensive; some owners do not charge, but the bloggers charge".* He further said, *"if you do not know I.T., you can go to a cyber, and then they can overcharge you, and now this becomes very expensive, and you find the materials".* This contribution transitions to another great theme- technological challenges, which were not within the initial scope of this survey.

Regarding technological challenges, teachers with learners without impairments shared the following experiences: *"there is this issue of internet..."; "Whereby you have technical challenges, a member may not have adequate skills in copyrighting, maybe you want to do copyrighting, and you do not have the adequate skills that will enable you to do the task."; "We rely primarily on individual efforts, and as I said, that means that a teacher will have to buy bundles; their bundles because our schools are not connected to the internet, and the network itself is a problem"; "Maybe you want to download something, and you do not have the data, or even the cyber is very far away; the net also, the internet is slow, you cannot get what you want, and at times you do not get a clear picture, you cannot use them in class, maybe they are not large enough to be used in a classroom".*

The same member further added the following, *"the format is wrong; you find it has saved itself as a webpage, not as a diagram or a picture, so when you reach the class, you are trying to open that material, it is asking for internet accessibility so that it can open, and at that time, you do not have the internet bundles, and that time that is what you are relying on, so you have to think of alternatives, getting stuck in class while presenting something, you have already downloaded, it gets lost, it is a total mess, it is embarrassing".*

Several other challenges were identified within the focus group discussion. These are elaborated on in the following paragraphs.

- **Unavailability or Shortage of Power**

A teacher with learners without impairments shared that, *"sometimes as you retrieve the material, then your phone goes off--, then that information gets lost, some of the places maybe there is no electricity, and you need to get the material and some of the material even they are not available".*



- **Exclusion on Account of Size/Volume of Material**

A teacher with learners with different impairments (visual and hearing) shared that; *"the textbooks, the content is just too wide for the learners in the hearing impaired, for example, we have the comprehension part-- the theme can be the same but let it be a bit short, and the words are too many, it becomes a challenge for these deaf learners, we sign every word, so too many words become a challenge when these books are made, they cannot be too wide, the publishers should make them a bit short, we also prefer graphical wordings-- more pictures than words, another challenge we have is sign language books are not there, we do not have the appropriate materials developed for the learners with intellectual challenges, the ones given by the government- we get materials for the regular classroom."*

- **Large Volumes of Materials**

This was raised from a mixed group comprised of teachers with learners with hearing and visual impairments. Large volumes of materials made it difficult to either translate or interpret adequately. One participant stated that; *"For example, we have the comprehension part-- the theme can be the same but let it be short, and the words are too many; it becomes a challenge for these deaf learners because we are learning from looks and signs; we sign every word, so too many words become a challenge, when these books are made, they cannot be too broad, the publishers should make them short, we also prefer graphical wordings-- more pictures than words"*.

- **Unavailability of Relevant Teaching and Learning Materials**

Teachers with mixed groups (hearing and visual impairments) shared: *"... another challenge we have is sign language books are not there"; "we do not have the appropriate materials developed for the learners with intellectual challenges, for example, we are grateful that KICD has been able to come up with some curriculum designs, but any other material concerning the learners with intellectual challenges is not available, the ones given by the government- we get materials for the regular classroom, we rely primarily on individual efforts and like I said, that means that a teacher will have to buy bundles"*.

- **Delays**

A teacher with learners with different impairments (visual and hearing) shared that; *"always, the learning materials from the government come in very late, the priority is for the regular children, and then ours arrives late"*.

- **Inappropriate Material**

Teachers with learners with visual and hearing impairments shared as follows: *"sometimes, we have inappropriate materials within these books, so we have that challenge"; "we have some sites that are not good for the learners, and in this case, they*

bring safety concerns to the learners; now these sites sometimes you might be using a certain site, but while using that site, some funny things end up popping up on maybe the screen of the tablet or the desktop the learners are using; these sites are sometimes funny and not good, especially to these learners”.

- **Limited Permission/restrictions**

A teacher from those with learners without impairments shared that; *“it opens up another page that requires you to pay some money in order to access it, and by that time, maybe you do not have money, and you know the online process of paying, while accessing copyright materials, sometimes it just blocks you, and the instructions appear that you need rights to access these materials”; “I usually download materials, maybe for my study, and there are some documents sometimes you open, and you are not allowed, it says, you cannot be allowed, to access you have to pay some money, but there are those which you can have them, you can use them, it says, you cannot be allowed, to access you have to pay some money, but there are those which you can have them, you can use them”.*

- **Limited Time**

A teacher from the group comprised of those with learners without impairments shared that, *“it also takes much time for searching the information from them-- as you want to copy something or you want to get something which has copyright, you have to search for the correct information first, so you waste much time.”*

- **Harassment by Copyright Law Enforcers**

Although this emerged from the discussion about knowledge of copyright it is a challenge. A male teacher from the group comprised of those with learners without impairments shared:

“my colleague sent some pupils outside the gate where there is cyber to photocopy some pages in the Social Studies book, and then those children, they came back with an adult, with a stranger, we did not know who he was, but when he came to the office, he said he is from the copyright, the body that deals with copyright and he was accusing the teacher who sent the kids that he had infringed some copyright laws of photocopying a book which is somebody else’s book he even opened the first pages of the book where there was a disclaimer, saying that this book”.

Strategies for Overcoming Copyright-Related Challenges

Table 3.17 summarizes strategies for overcoming copyright-related challenges. Over half (52%) of the respondents indicated that they refrain from using materials even though it would be good for their class. Almost a quarter (22.5%) shared that they overlooked the obstacles and use the material without authorization. Conversely, just 16.3 per cent (13



respondents) indicated that they comply by paying to use the material. These findings could have several implications.

On one hand, refraining from using the relevant materials could mean that teachers miss out on significant knowledge and information, which could also mean being unable to deliver the expected quality education to their students. This situation is consistent with Jia (2022) as well as Vien et al. (2019) who assert that such situations could result in teachers facing obstacles in accessing and utilizing teaching and learning information resources, thereby limiting the educational opportunities available to them.

On the other hand, overlooking the obstacle and using the material without authorization could have legal and/or reputation implications for the teacher. Such actions could further lead to a teacher losing their job, thereby robbing the profession and the learners the much needed knowledge offered by such a teacher. This situation therefore calls for urgent and purposeful action on the part of government, with regard to copyright laws, if effective access and use of teaching and learning materials by Kenyan teachers is to be achieved.

Table 3.17. Strategies for Overcoming Copyright-related Challenges

<i>Responses</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>I comply by paying to use the material</i>	13	16.3	16.3
<i>I overlook and use without authorization</i>	18	22.5	22.5
<i>I refrain from using even though they would be good for their classes</i>	42	52	52
<i>I do nothing</i>	7	7	7
Total	80	100.0	100.0

The following excerpts indicate what the focus group participants shared as strategies to overcome the copyright-related challenges:

- A teacher with learners with intellectual impairments shared: *“what we normally do is connect these tablets to the network, then we tend to provide a certain link that the learners can connect so that after connecting, they can access the different learning materials from the net.”*
- Teachers with learners with intellectual impairments shared: *“you take photographs of such materials that are maybe not available in the school, then we normally project them for the learners to see”; “...using locally available materials”; “others we buy”; “...we ask the school to buy for us”; “... we ask the school to provide them”; “...we place our requisitions”.*

Discussion

The study findings are divided into six subsections that address research questions. The conclusions are drawn based on the findings and they inform the suggested improvements for accessing and using teaching and learning materials.

Teaching Students beyond Kenyan Borders

An open-ended question asked respondents to indicate the specific teaching modes used when teaching students located in different countries. The question aimed to understand the modes of teaching employed in such cross-border educational contexts. The findings showed that over half of respondents indicated that the question was not applicable to them, which most probably mean that students were taught face-to-face. However, a third of respondents said that they used online teaching methods, and five participants reported using blended teaching ones. These last results might suggest a growing trend in remote teaching and learning through digital platforms, possibly influenced by technological advancements and the convenience it offers. The popularity of online education could also be driven by factors such as the COVID-19 pandemic, which accelerated the adoption of remote teaching and learning, not only in Kenya but across the globe. These findings could also indicate that, other than the conventional means of teaching, Kenyan teachers are able and willing to go out of their way and use other emerging means of teaching.

Access and Use of Teaching Materials

This section addressed two aspects; firstly, the types of materials teachers access and use for teaching and learning, and secondly, how teachers use these teaching materials.

In addressing the first part of the question, the findings indicated that teachers access and use various teaching and learning materials. The multiple means of access to teaching and learning materials imply that teachers have the autonomy to use a diversity of resources to which a description of how they exercise that freedom is demonstrated. The survey measured the frequency of access and use of different types of materials created explicitly for teaching and learning and other that complement these activities. Additionally, the focus group discussions elicited an additional list of materials they accessed for teaching and learning. The results of the survey clearly showed when it comes to traditional materials created explicitly for teaching, the majority of participants most frequently access and use printed non-digital learning materials such as text books and journals, although the use of digital materials is not negligible and seems to be growing. More than a quarter of participants access and use digital commercial teaching materials almost at a daily basis, while another quarter use materials that are online and free very frequently. This shows the importance of digital materials for teachers' work, regardless that they are commercial or free to access. Therefore, most teachers comply with the guidelines laid out by Kenya Institute of Curriculum Development (KICD) and



the Ministry of Education, both being government agencies responsible for regulating the education sector. The materials recommended by the government agencies include commercial textbooks and printed non-fiction books. Other materials included digital e-books and e-journals, recorded copyrighted materials, and digital newspapers.

Meanwhile, when it comes to materials that complement the traditional teaching ones (i.e., research papers, videos, newspapers, printed books, etc.), the results indicate clear evidence that teacher frequently use them; that is, teachers use diverse and creative means to perform their pedagogy practices. The diverse approaches further indicate that over and above textbooks recommended by government agencies, teachers had the autonomy to decide on additional materials to include in their teaching activities. The ability of teachers to include additional teaching materials over and above the recommended textbooks could also have implied that teachers supplemented the core textbooks to meet the needs of diverse students. These findings concur with the reviewed literature where teaching and learning materials, such as textbooks, workbooks, handouts, and audio-visual resources, were identified as accessed and used in classrooms (Oppong Frimpong, 2021; Armstrong & De Beer, 2010; Ndirangu & Udoto, 2011; Mutisya & Makokha, 2016; Kiru, 2019). Furthermore, our evidence suggests that teachers have a strong preference for materials that are open-access and can be used freely and online. This is particularly the case of open-access research papers, which are crucial for teachers that work in universities (the majority in our sample), where acquiring costly licenses could be not easily accessible.

The findings of the study also provided valuable insights regarding the extent to which participants used copyright protected materials for students' examinations, display them when presenting in their classrooms or sharing them with their students. A group of teachers mostly use, display or share either parts or the entire copyright-protected material, but another group prefer not to use, display or share it at all. These results reflect the type of constraints that teachers experience when using copyright protected material for their work. The literature further noted that copyright laws in Kenya grant authors exclusive rights over the use, reproduction, and distribution of these materials (Mutisya & Makokha, 2016). Teachers therefore, ought to be content with accessing and using teaching materials within the confines of the copyright laws of Kenya. As noted by Mutisya and Makokha (2016) and Kiru (2019), the limited availability and access to such materials may have directly or indirectly impacted the quality of education.

Arising from the findings of this study and the reviewed literature, it emerges that although teachers may have the autonomy to decide which materials to include in their teaching, they are limited by the exclusive rights accorded to the authors. The extent to which teachers comply with copyright laws is subject to further studies.

It is also worth noting that, although libraries are critical institutions, especially at the tertiary level of education, while responding to an open question measuring this variable, no respondent mentioned having accessed or used resources through the library. This could either imply that teachers had access to additional teaching, research, and learning materials through the library or libraries do not have sufficient resources teachers require, so they look for materials elsewhere.

Strategies used to Access and use Teaching and Learning Materials

This section addresses the question on approaches used to access teaching and learning materials. It explored different approaches to accessing teaching and learning materials through open-ended survey questions summarized in Table 3.14.

The main question was open-ended, to enable teachers to share their experiences on actions they would take whenever teaching and learning materials were inaccessible. From the survey, 29 respondents, or 36%, said they would “do nothing”, the combined options of alternative sources, improvisation, and using local materials accounted for 63.8% of the responses, which was further upheld by results from the focus group discussions, with improvisation, adaptation, and use of environment emerging as key strategies. This implies that Kenyan teachers are able to use alternative sources but it can increase their workload since as expressed by one teacher, it takes time to find sufficient and appropriate materials. Drawing from the reviewed literature and following the findings previously discussed, Open Educational Resources (OERs) are a potential alternative or could complement traditional copyrighted teaching materials in Kenya. Based on Huang et al. (2020), OERs are defined as *“teaching, learning, and research materials in any medium that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions”*. It would therefore be prudent for teachers to use OERs as a means of improving their access and use of teaching and learning materials. Research has shown that OERs can increase access to educational resources, reduce costs, and improve the quality of education (Hobbs, 2010). In Kenya, there have been initiatives to promote the use of OERs, such as the Kenya Institute of Curriculum Development (KICD) Open Educational Resources Program (OER) which provides teachers with open access to high-quality, locally relevant, and up-to-date learning and teaching materials (KICD, 2021).

Taken together, the following implications may emerge.

- The fact that a significant portion of respondents expressed *“doing nothing”* may suggest reliance on traditional methods that heavily depend on specific materials as most likely recommended by the government. This highlights on the one hand, the importance of promoting open-access and freely accessible materials that complement traditional textbooks and on the other, ensuring adequate access to teaching and learning materials to support effective instruction.
- The finding that many respondents considered *“alternative sources”* manifests the autonomy and value of seeking alternative materials beyond traditional resources or recommended textbooks. Furthermore, it suggested that teachers were open to exploring diverse sources of teaching and learning and used a wide range of materials.
- The diversity of responses, including a range of choices and preferences, highlights teachers’ professional autonomy and decision-making authority. This emphasizes the importance of empowering teachers to make choices based on their professional judgment and the specific needs of their students.
- Utilizing local resources as alternative methods may suggest more student-centered and experiential learning approaches that leverage available resources and incorporate real-world contexts.



Teacher's Knowledge of Copyright Laws

This section addressed the question of teachers' knowledge of copyright laws in Kenya, framed as how familiar teachers are with copyright laws regarding accessing and using copyright-protected teaching and learning materials.

According to the results of the survey and focus group discussions, there is a relatively even distribution of familiarity levels with copyright laws among respondents, although the majority of respondents were between somewhat familiar to very familiar with the contents of the law. The findings also indicate a small percentage of respondents who reported being "*not aware*" or "*somehow not aware*" of copyright laws, which may suggest a lack of knowledge among Kenyan teachers. This suggests that Kenyan teachers have varying levels of familiarity with copyright laws, which could be due to differences in complexity or exposure to copyright laws.

These findings partly reflect the reviewed literature, which showed that many Kenyan teachers did not only have limited knowledge of copyright laws, but they had rarely received formal training on the subject (Mathangani & Otike, 2018; Olaka, 2010; Olaka & Adkins, 2012). As further indicated in literature, this lack of awareness could lead to unintended copyright infringement, with teachers unaware of the potential consequences, such as legal action and reputational damage (Mathangani & Otike, 2018; Olaka, 2010; Olaka & Adkins, 2012).

Based on these findings, several potential implications arise.

- Unintended copyright infringement; teachers may unknowingly violate copyright laws by using copyrighted materials without proper permission or licensing. This can include using copyrighted textbooks, images, videos, or other teaching materials without understanding the legal implications.
- Legal consequences; teachers who infringe copyright unintentionally may face legal action from copyright owners. Copyright holders are protected by Section 26 of the Copyright Act 2002 and can take legal measures, such as filing lawsuits or issuing cease and desist notices. Teachers could face fines, penalties, or other legal repercussions as a result.
- Reputational damage; engaging in copyright infringement can harm the reputation of teachers and educational institutions. Being involved in legal disputes related to copyright can negatively impact their professional standing and public perception. This could affect their career prospects and relationships with students, parents, and the wider educational community.
- Limited access to quality resources; lack of awareness about copyright laws may lead teachers to avoid using potentially valuable copyrighted materials altogether, fearing legal consequences. This could restrict their access to a wide range of high-quality resources, hindering their ability to provide the best education possible to students.
- Missed learning opportunities; Teachers unaware of copyright laws may not effectively teach their students the importance of respecting intellectual property rights. Neglecting to educate students on copyright and fair use may inadvertently perpetuate a lack of understanding among future generations.

Copyright-related Challenges

This section addressed the question on the challenges teachers face with regard to copyright laws in Kenya, framed as “*what copyright-related challenges do you encounter*”.

While survey results in Table 3.15 indicated that the majority (36.3%) of responding teachers experienced uncertainty regarding copyright laws, followed by limited permission issues and prohibitive costs among others. Interestingly, focus group discussions pinpointed prohibitive costs as the most common challenge. Other challenges raised in focus groups discussions included limited permission, exclusion based on the size or volume of teaching materials, unavailability of relevant teaching materials, delays in delivering materials to schools catering to different impairments, and harassment by copyright enforcement officers, as detailed in the results section. It is therefore apparent that prohibitive costs and limited permission are major challenges experienced by Kenyan teachers, although the issue of prohibitive costs seemed to be more pronounced among the primary level teachers.

These findings are fairly consistent with the reviewed literature, which revealed challenges such as difficulties in understanding the scope and limitations of fair dealing provisions, limited access to licensed digital content, lack of guidance and support, confusion over copyright ownership, and financial constraints in obtaining licenses or permissions (Hobbs, 2010; Munezero et al., 2016; Weber & City, 2012). These challenges can negatively affect the quality of education, hindering teachers’ ability to prepare effective lessons and engage students. It also emerged from the results that teachers with learners with various impairments experienced unique challenges compared to those dealing with learners without impairments and those at other levels of teaching.

Based on the copyright-related challenges highlighted and summarized above, the following implications may arise.

- The fact that a significant number of respondents reported experiencing uncertainty may indicate a lack of understanding and awareness of copyright laws among educators. This can lead to unintentional copyright infringement and potential legal consequences.
- On issues of limited permission, the finding that around 39% of respondents encountered limited permission issues suggests that teachers face challenges in obtaining proper authorization or licenses to use copyrighted materials. This can restrict their access to valuable resources and limit the quality of education they can provide.
- Respondents who reported facing prohibitive costs highlight the financial challenges of obtaining copyright permissions or acquiring appropriate teaching materials. These costs can create barriers to accessing necessary resources, particularly for teachers working with visually and hearing-impaired learners. On exclusion based on teaching material size or volume, the focus group discussions revealed that teachers with visually and hearing-impaired learners faced exclusion and challenges related to the size or volume of teaching materials, such as braille. This exclusion hinders their ability to provide inclusive education



and may result in unequal learning opportunities for students with disabilities.

- Regarding unavailability of relevant teaching materials, the lack of availability of relevant teaching materials identified as a challenge can negatively impact the quality of education. Teachers may struggle to find appropriate resources aligned with their curriculum or tailored to the needs of their students, impairing effective teaching and learning. Delays in delivering teaching materials to schools catering to different impairments can cause disadvantages for the receiving teachers. This situation can disrupt lesson plans, hinder curriculum implementation, and negatively affect the learning experience for students.
- Copyright restrictions on translations or adaptations may also be a hindrance to teachers with visually and hearing-impaired learners reported difficulties due to copyright restrictions on translations or adaptations. These restrictions may limit the availability of accessible educational materials, hindering the provision of inclusive education for students with disabilities.
- Harassment by copyright enforcement officers, which was reported by some teachers describes negative interaction between educators and the authorities responsible for enforcing copyright laws. Such experiences can create a hostile environment and discourage teachers from effectively utilizing copyrighted materials in their teaching practices.

Ways of Overcoming Challenges

This section addressed the ways of overcoming the challenges identified and discussed in section 5 framed as “*what do you do whenever you encounter copyright-related obstacles?*”.

While the survey results in Table 3.17 revealed that most respondents (52.5%) refrained from using materials even though they would benefit their class, 22.5% overlooked the obstacles and used materials without authorization, while 16.3% complied by paying for the materials. The focus group discussions revealed various other strategies. To address network and bandwidth instability, participants practiced downloading materials and then photocopying them, checked for materials in advance, ensured uniform distribution to students, and utilized digital cameras. In case of shortage of teaching materials, they took photographs of unavailable materials and projected them for the learners to see.

While these strategies may have proved helpful in the existing circumstances, they could also have a number of implications. Reluctance to use teaching materials could, for instance, limit access to valuable resources and have potentially impact the quality of education provided to students. Additionally, overlooking copyright obstacles and using materials without authorization may suggest a disregard for intellectual property rights, which could lead to legal consequences and reputational damage if copyright holders take action, even as it may provide immediate access to resources.

Compliance by paying for materials is an strategy that a minority of educators do. They may be aware of and willing to follow the legal requirements for using copyrighted materials, which can help support creators and rights holders, while ensuring proper permissions are obtained. It remains to be understood whether the costs of the materials were afforded by teachers themselves or by their institutions. Teachers whose institutions

cannot afford those costs may be in disadvantage, as well as students in the poor and/or rural areas and especially schools in the marginalized regions of the country.

In order to overcome network and bandwidth instability, which was mentioned in the focus group discussions, teachers downloaded, photocopied and checked materials in advance. While these strategies may allow educators to have offline access to materials and mitigate issues caused by unreliable internet connections, it could also mean flouting copyright laws, which could attract legal implications to the teacher and the institutions.

The use of digital cameras to enable effective capturing and sharing of teaching materials and enhancing the learning experience and uniform distribution and utilization, could help maintain consistency and equity in access to educational resources. This behaviour demonstrates teachers' commitment to their students and to their education in overall, however it opens them up to liability in terms of copyright infringement, including fair dealing, which is a contagious issue in Kenya.

These findings are consistent with various reviewed literature, including Hobbs (2010), Charbonneau and Priehs (2014), Ganapathi (2018), Kapitzke et al. (2011), Lamlert (2014) and Pounds and Bostock (2019) who affirm that teachers access copyright-protected teaching and learning materials using various strategies. The strategies put forward by these studies include such utilizing alternative print-based resources through the internet and licensed materials, creating their own original content, utilizing open educational resources (OER), and obtaining permission from copyright owners directly.



Conclusions

- The analysis of section 26 of the copyright laws of Kenya reflects a number of issues. First, it is lack of clarity in the language used in the copyright law, which is often intricate and legally oriented. This complexity can create challenges for key stakeholders in the education sector, such as teachers, researchers and librarians, making it difficult for them to fully comprehend the exceptions and fair dealing provisions related to teaching and learning activities.
- The second issue is implicit emphasis on creators as the copyright law appears to primarily focus on protecting the rights of creators and authors of various works, including literary, musical, and artistic creations. The law therefore, places emphasis on their exclusive control over reproduction, distribution, and communication to the public.
- The third issue is on ambiguities and interpretations as exhibited in several instances, where the law's provisions related to education are rather implicit and therefore, open to diverse interpretations. This ambiguity could lead to different users applying the law differently, which can lead to undermining the intended purpose of the legislation.
- The fourth issue is on challenges in educational use as echoed by previous studies, indicating that the current copyright law's limited provisions for educational use pose significant challenges to teachers. The strict enforcement of these laws can hinder access to valuable resources and the ability of teachers to enhance their teaching capabilities and methods.
- Lastly, the impact on education quality as the obstacles created by copyright laws, can potentially compromise the quality of education by limiting teachers' access to diverse and relevant teaching and learning resources. These challenges pertain to the capacity of educational establishments to proficiently use teaching and learning materials. Consequently, a well-rounded strategy is needed to find a just balance between the privileges of copyright owners and the wider societal requirements for education, exploration, and public welfare in Kenya. This balance would facilitate the spread of knowledge and information, all the while upholding the rights of innovators and copyright owners.
- Based on the analysis provided, from the findings regarding teaching students beyond Kenyan borders the study concluded that Kenyan teachers use diverse modes of teaching and learning; a fairly good percentage of Kenyan teachers use online teaching despite the numerous restrictions imposed on access and use of digital materials by the copyright laws. The prevalence of online teaching and learning could suggest the increasing influence of technology on education, especially in the post COVID19 era. These results are an indication that Kenyan teachers are willing and able to adopt remote means of teaching.

- On access and use of teaching and learning materials, Kenyan teachers said they frequently access and use printed/non-digital and commercial (recommended) teaching materials in the classrooms, and to a lower but significant degree, to digital versions of textbooks and journals, digital databases, open-access research papers, and subscribed research papers.
- Based on the strategies used to access teaching and learning materials, although a significant portion may rely heavily on traditional methods that heavily depend on specific materials, most likely recommended by the government, the evidence collected highlights teachers' ability to select and use alternative and diverse types of teaching materials, thereby ensuring effective delivery of quality education to learners. Strikingly, teachers showed clear preference for open-access and free online material, which emphasize the importance of those materials for their work.
- The findings on copyright-related challenges, Kenyan teachers reported to have experienced uncertainty regarding copyright laws, limited permission issues, and prohibitive costs, exclusion based on the size or volume of teaching materials, unavailability of relevant teaching materials, delays in delivering materials to schools catering to different impairments, and harassment by copyright enforcement officers. It is also clear that teachers with learners with various impairments experienced identified unique challenges.
- The strategies used by teachers to overcome the challenges included - refrained use of materials even when they would benefit their use in class; overlooking the obstacles and using materials without authorization; complying by paying for the materials; downloading materials and then photocopying them; checking for materials in advance; ensuring uniform distribution to students; utilizing digital cameras and taking photographs of unavailable materials and projecting them for the learners to see.



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Access and Use of Teaching and Learning Materials from a Copyright Perspective in Kenya

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