



PREPARED FOR:



# TRANSFORMING LEARNING THROUGH ICT DIGITAL LEARNING ACCESS IN KENYA

PREPARED BY:

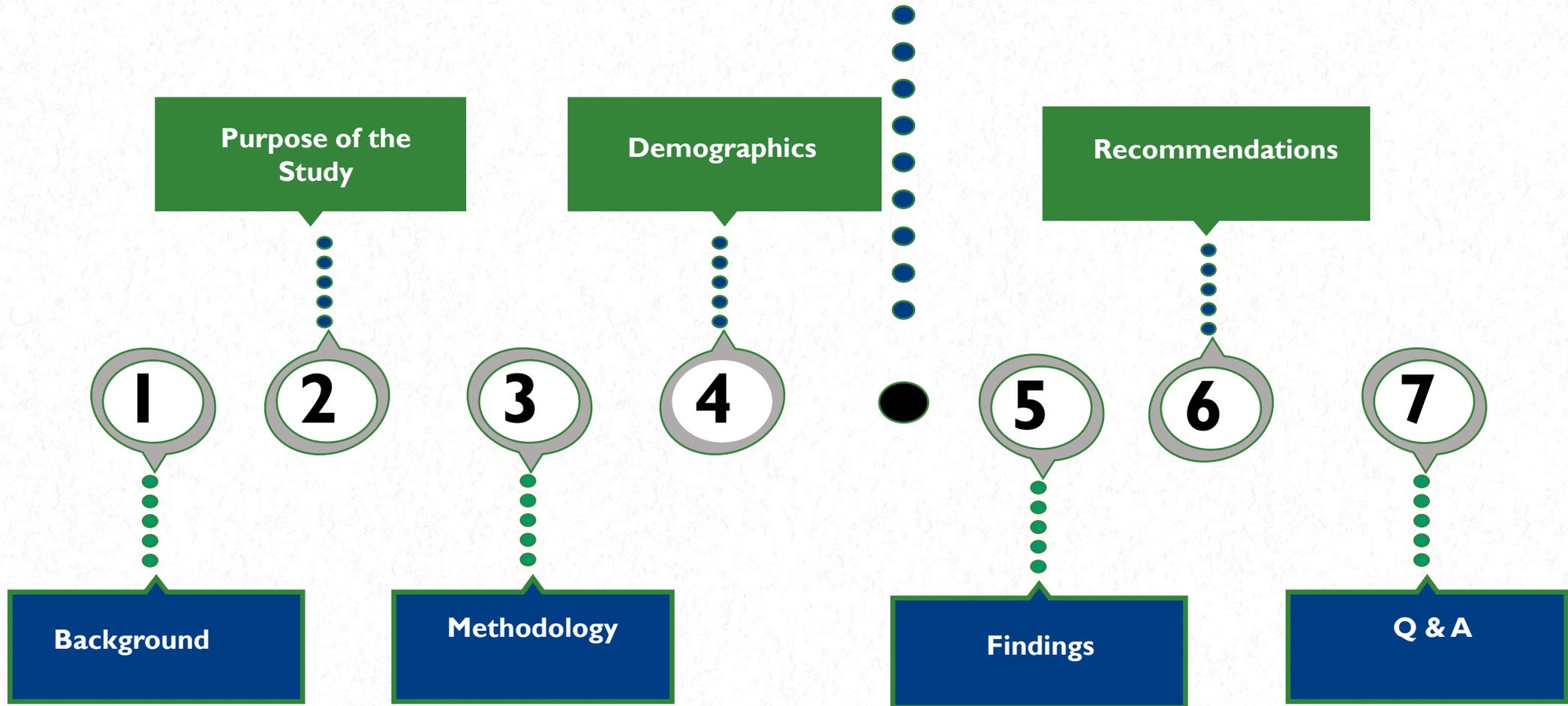


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SEPTEMBER 2024

# Contents



# PROJECT BACKGROUND

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ChildFund Kenya with funding from Korea is implementing the project titled “***Elimu KiDijitali: Transforming Learning through ICT Digital Learning Access in Kenya***”.

The project focuses on enhancing digital learning access and covered the Nairobi Metropolitan Area, (*Nairobi, Kiambu, and Murang’a Counties*).

| County   | Schools   |
|----------|---|
| Nairobi  | Njiru Primary, St. Dominic Primary Mukuru Primary, St. Catherine Primary, St. Elizabeth Primary Schools |
| Kiambu   | Nderi Primary and Kikuyu Township Primary School  |
| Murang’a | Peter Kariuki (P.K) Primary, Kangangu and Swani Primary Schools   |

The project aims to benefit various stakeholders, including children/learners (male/female), teachers and administrators (male/female), Caregivers/guardians (male/female), and government officials

# Purpose and Objectives of the Study

The aim of the **BASELINE SURVEY** was to evaluate the digital landscape and opportunities for 8,300 children to safely explore, acquire digital learning skills, and connect without facing exploitation or harm in the online space.

**Several objectives fed into the below 3 results areas:**

1. Assessing the **digital learning** environments.

2. Understanding the levels of **access and barriers** to quality digital learning education resources.

**3. Understanding the** legal and policy environments with regards to digital learning.

# METHODOLOGY

# Methodology

The survey utilized a cross-sectional study design, incorporating a mixed methods approach. This approach combined both quantitative and qualitative data collection techniques.



**Desk research** - Review of relevant publications, previous reports and review of laws and policy on Education



**Qualitative research**

6 FGDs  
21 KIs



**Quantitative research- 348**

Learners-255  
Teachers-30  
Caregivers -63

# Achieved Interviews

## Qualitative Phase

### Achieved KIIs

| County                 | Description   | Target    |     | Achieved  |
|------------------------|---|-----------|-----|-----------|
|                        |   | HTs       | BOM |           |
| Kiambu                 | Kikuyu Township (Head teacher)  | 2         | 1   | 3         |
|                        | Nderi Primary (Head teacher & BOM)  |           |     |           |
| Murang'a               | P.K Primary (Head Teacher)  | 2         | 1   | 3         |
|                        | Swani Primary (Head teacher & BOM)  |           |     |           |
| Nairobi                | St. Dominic (Head Teacher)  | 3         | 2   | 5         |
|                        | St. Catherine (Head teacher & BOM)  |           |     |           |
|                        | St Elizabeth (Head Teacher & BOM)   |           |     |           |
| Other key stakeholders | KII with E-learning Publisher, TSC, MoE Nairobi, MoE Kiambu, MoE Muranga, ICT Nairobi and ICT Kiambu, CBO and KICD, Project Staff | 11        |     | 10        |
| <b>TOTAL</b>           |   | <b>22</b> |     | <b>21</b> |

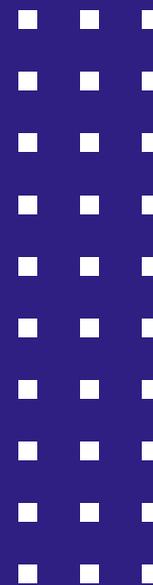
### Achieved FGDs

| County       | Description                  | Target     |          | Achieved |
|--------------|------------------------------|------------|----------|----------|
|              |                              | Caregivers | Pupils   |          |
| Kiambu       | Kikuyu Township (caregivers) | 1          | 1        | 2        |
|              | Nderi Primary (Pupils)       |            |          |          |
| Murang'a     | P.K Primary (caregivers)     | 1          | 1        | 2        |
|              | Swani Primary (Pupils)       |            |          |          |
| Nairobi      | St. Dominic (caregivers)     | 1          | 1        | 2        |
|              | St. Catherine (Pupils)       |            |          |          |
| <b>TOTAL</b> |                              | <b>3</b>   | <b>3</b> | <b>6</b> |

## Quantitative Phase

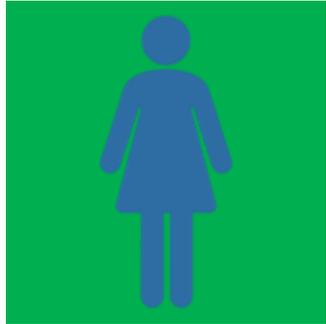
| County       | School          | Pupils     | caregivers | Teachers  | Classroom observation |
|--------------|-----------------|------------|------------|-----------|-----------------------|
| Kiambu       | Kikuyu Township |            |            |           |                       |
|              | Target          | 40         | 10         | 5         |                       |
|              | Achieved        | 42         | 10         | 5         | 1                     |
|              | Nderi Primary   |            |            |           |                       |
|              | Target          | 40         | 10         | 5         |                       |
|              | Achieved        | 40         | 10         | 5         | 2                     |
| <b>Total</b> |                 | <b>82</b>  | <b>20</b>  | <b>10</b> | <b>3</b>              |
| Murang'a     | P.K primary     |            |            |           |                       |
|              | Target          | 40         | 10         | 5         |                       |
|              | Achieved        | 40         | 11         | 5         | 1                     |
|              | Swani Primary   |            |            |           |                       |
|              | Target          | 40         | 10         | 5         |                       |
|              | Achieved        | 42         | 11         | 5         | 2                     |
| <b>Total</b> |                 | <b>82</b>  | <b>22</b>  | <b>10</b> | <b>3</b>              |
| Nairobi      | St. Dominic     |            |            |           |                       |
|              | Target          | 30         | 5          | 4         |                       |
|              | Achieved        | 30         | 5          | 4         | 4                     |
|              | St. Catherine   |            |            |           |                       |
|              | Target          | 30         | 7          | 3         |                       |
|              | Achieved        | 30         | 7          | 3         | 2                     |
|              | St. Elizabeth   |            |            |           |                       |
|              | Target          | 30         | 8          | 3         |                       |
|              | Achieved        | 30         | 8          | 3         | 2                     |
|              |                 | <b>90</b>  | <b>20</b>  | <b>10</b> | <b>8</b>              |
| <b>Total</b> |                 | <b>255</b> | <b>63</b>  | <b>30</b> | <b>8</b>              |

# FINDINGS



# Demographics

## Gender - Teachers



57%  
n=17

43%  
n=13

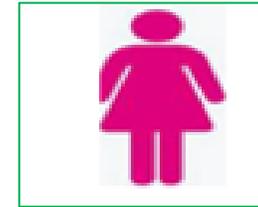
## Gender- caregivers



83%  
n=52

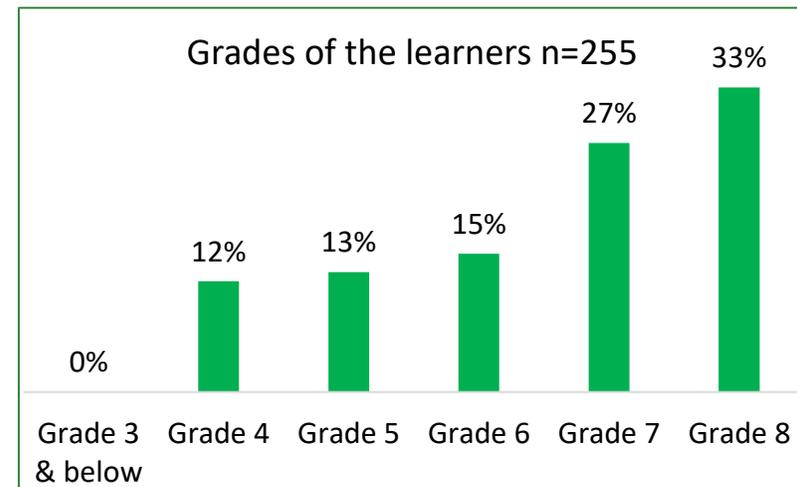
17%  
n=11

## Gender -Learners



55%  
n=141

45%  
n=114



## Outcome 1: *School communities have improved digital learning environments.*

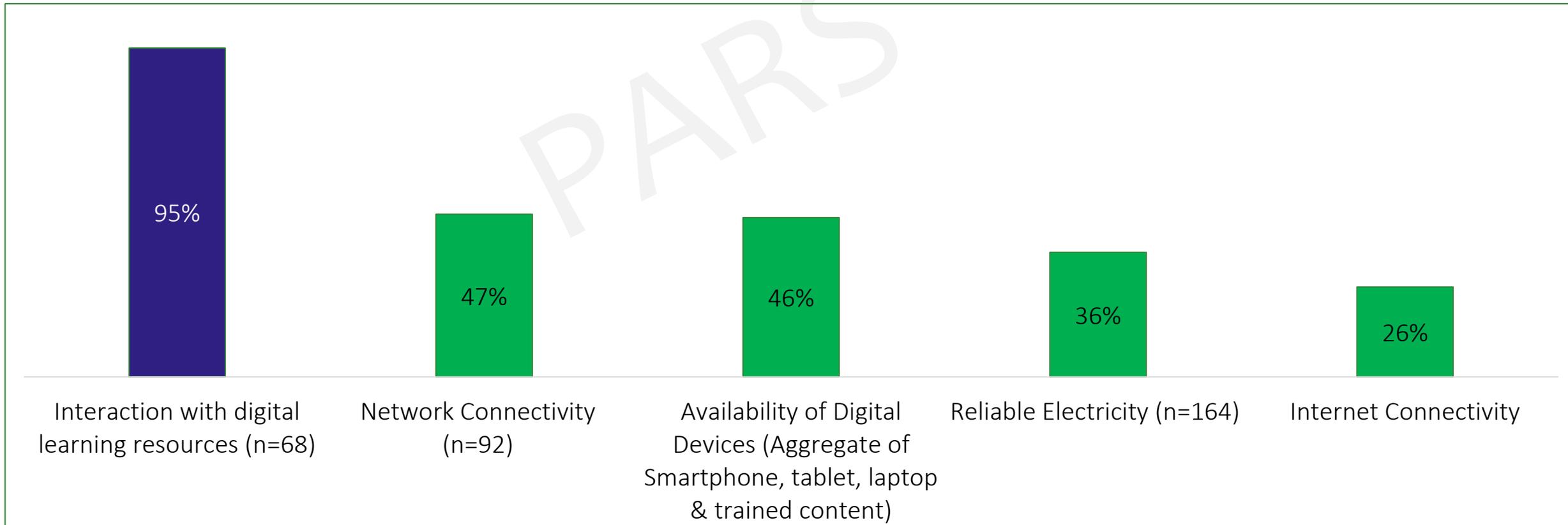
| Outcome  | Indicator   | Definition of Indicator   | Baseline   | Target |
|--|---|---|------------|--------|
| <b><i>Outcome 1:<br/>School communities have improved digital learning environments.</i></b> | I.1: Proportion of schools which have established digital learning environments | Total number of schools with digital equipment, teachers and school leadership trained on ICT integration and school leadership providing curriculum support/total number of targeted schools | <b>82%</b> | 100%   |

# Main Findings Cont'

## Outcome I: School communities have improved digital learning environments.

### I.1 Proportion of schools which have established digital learning environments

*Digital Learning Environments: the ecosystem of digital tools, resources, materials, and related technologies that support the many pathways of teaching and learning.*



## Perception of school children on the quality of digital learning education resources

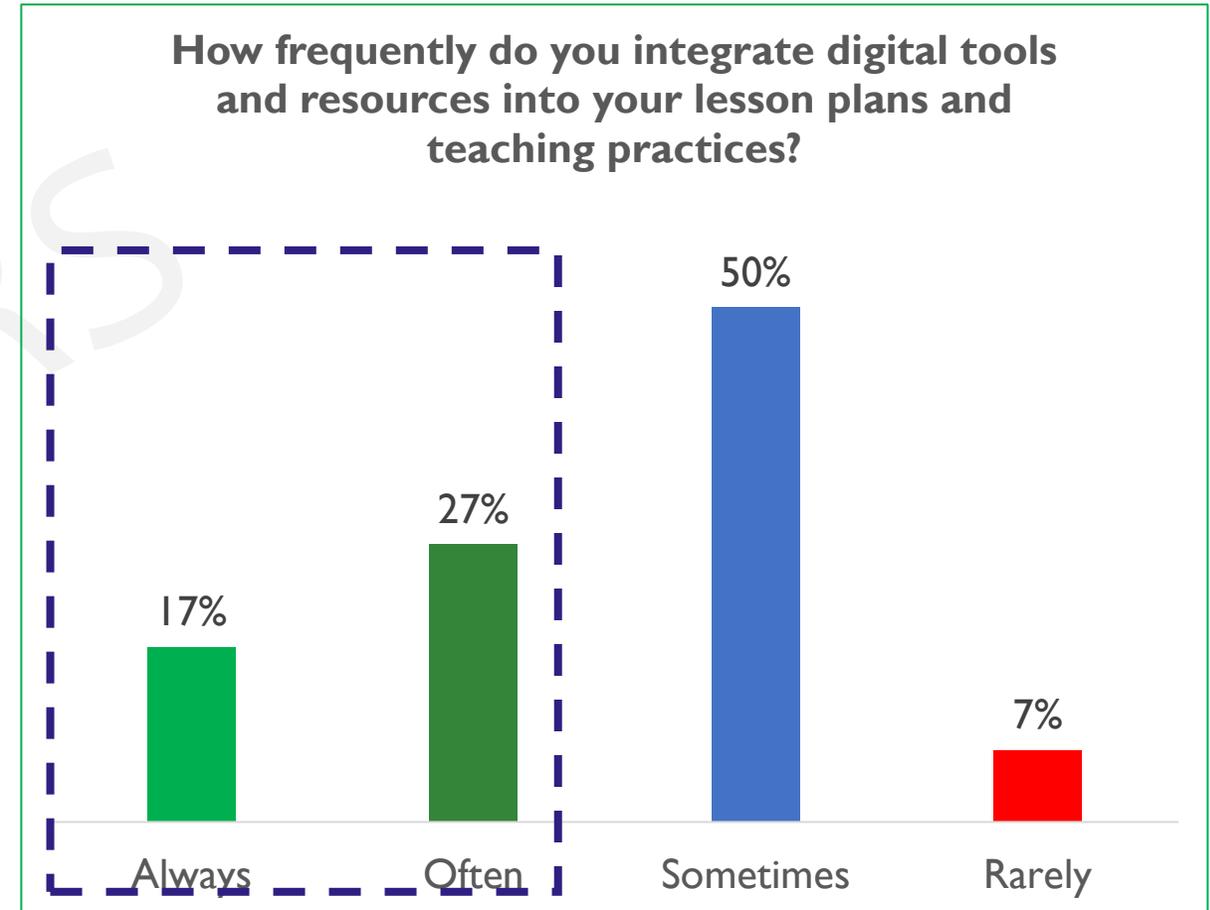
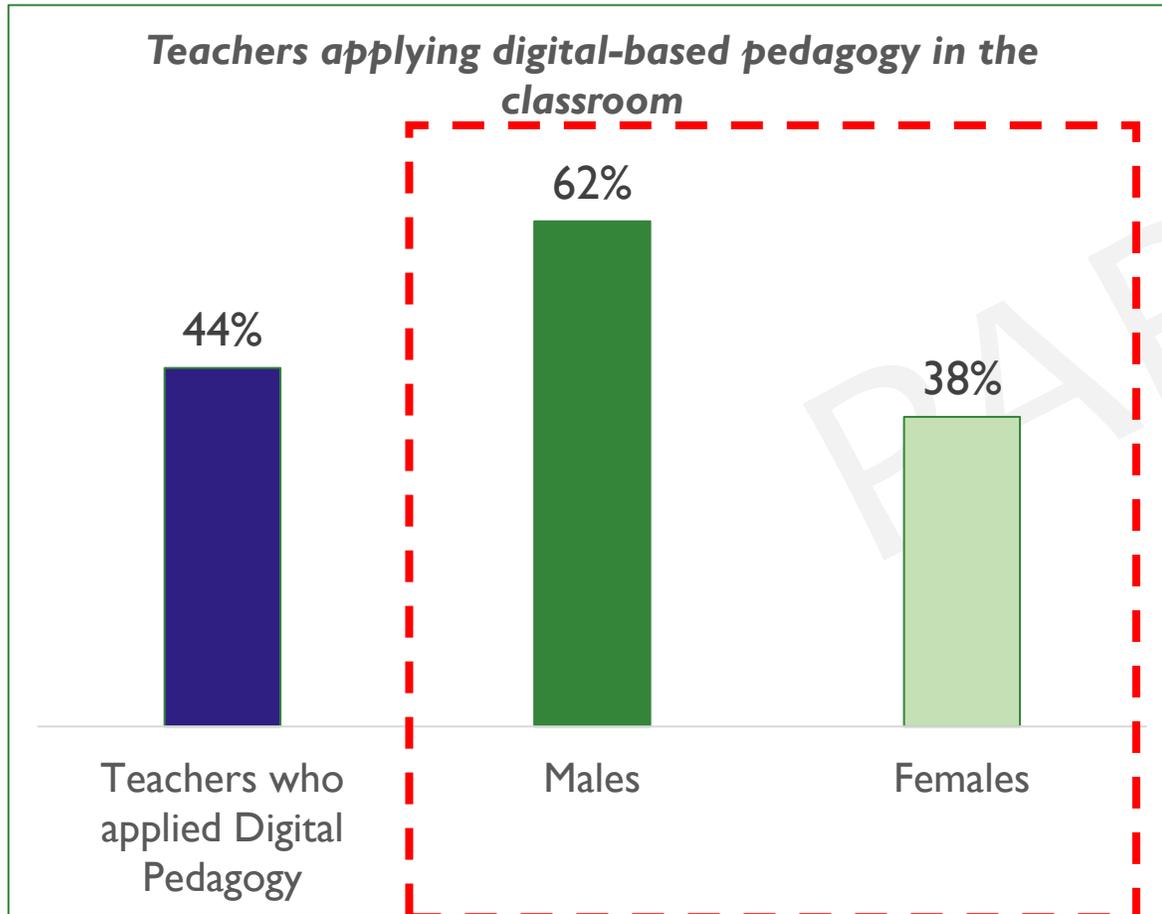
| Statement   | Response               |                              |
|---|------------------------|------------------------------|
|   | Agree & strongly agree | Disagree & strongly disagree |
| There are enough DLRs for everyone at school                          | 31% (n=79)             | 55% (n=140)                  |
| There are adequately approved digital content educators in our school | 35% (n=89)             | 39% (n=100)                  |
| There is reliable electricity supply in our school                    | 41% (n=105)            | 36% (n=92)                   |
| There is reliable internet connectivity in our school                 | 26% (n=66)             | 45% (n=115)                  |
| There is reliable network connectivity in our school                  | 36% (n=92)             | 35% (n=89)                   |

## Outcome 2: Learners have increased access to quality digital learning education resources

| Outcome  | Indicator  | Definition of Indicator  | Baseline   | Target |
|--|--|--|------------|--------|
| <b>Outcome 2: Learners have increased access to quality digital learning education resources</b> | 2.1 Percentage of teachers applying digital-based pedagogy in the classroom  | Total number of teachers trained implementing digital skills/total number of teachers trained in project area.                           | <b>44%</b> | 60%    |
|  | 2.2 Proportion of children with increased knowledge, attitude and practices regarding digital learning, OCSEA and online child safety.   | Total number of children with digital learning competencies and online safety/total number of children in targeted schools               | <b>33%</b> | 80%    |
|  | 2.3 Proportion of caregivers with increased knowledge, attitude and Practices regarding digital learning, OCSEA and online child safety. | Total number of caregivers who are skilled in digital learning and online safety/total number of caregivers targeted in the project area | <b>40%</b> | 75%    |

## Outcome 2: Learners have increased access to quality digital learning education resources.

### 2.1. Percentage of teachers applying digital-based pedagogy in the classroom

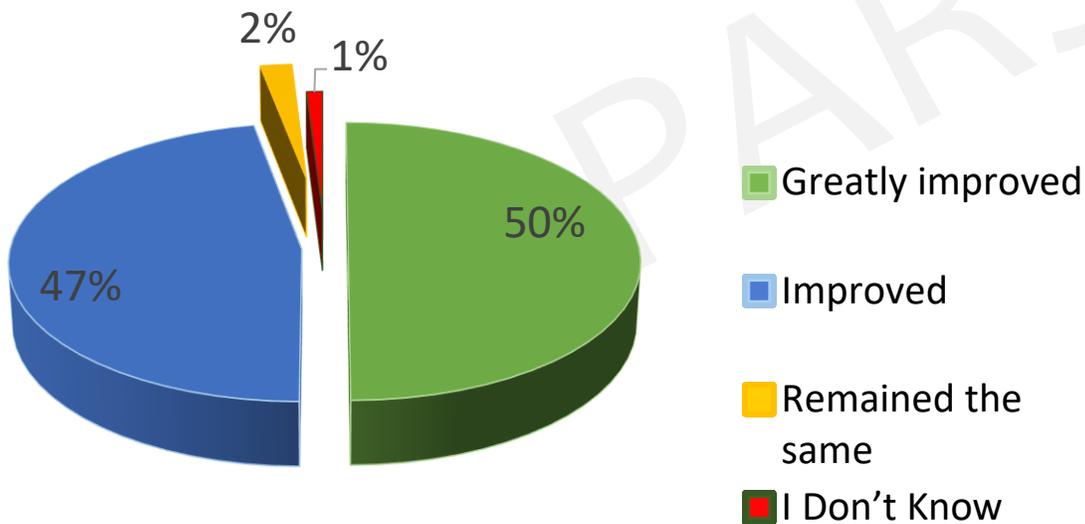


## 2.2. The proportion of children with increased knowledge, attitude and practices regarding digital learning, OCSEA and online child safety.

### Knowledge, Attitude and practices of school children regarding digital learning

Baseline Value of the proportions- 33%

How has the use of digital learning influenced your overall learning experience?



*My opinion, I feel like when I use the digital devices like the tablets am better, I also feel like the teachers are trying hard to make us understand better by use of digital devices*

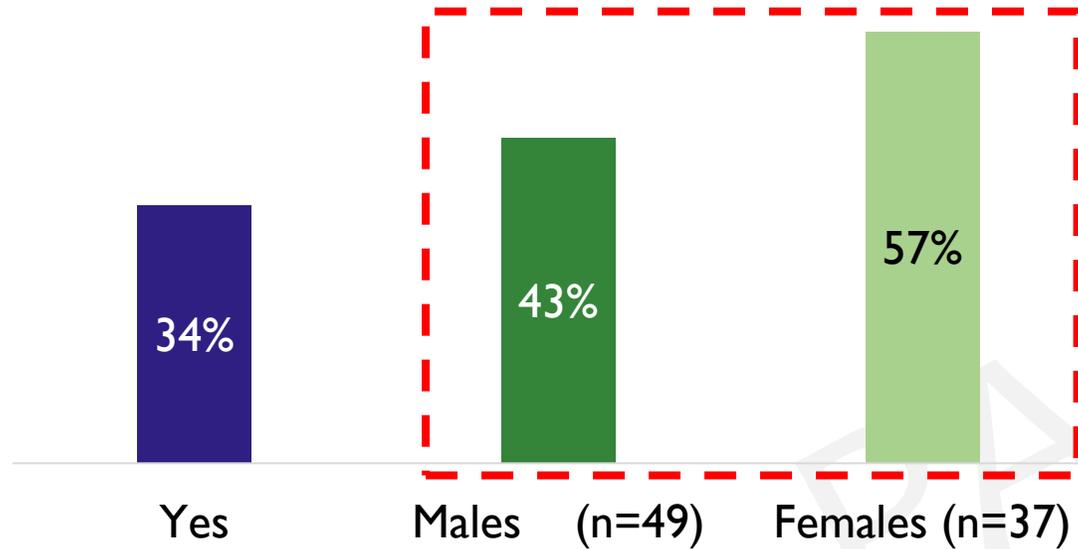


*“watching a video when learning is more enjoyable compared to just a teacher teaching.”*

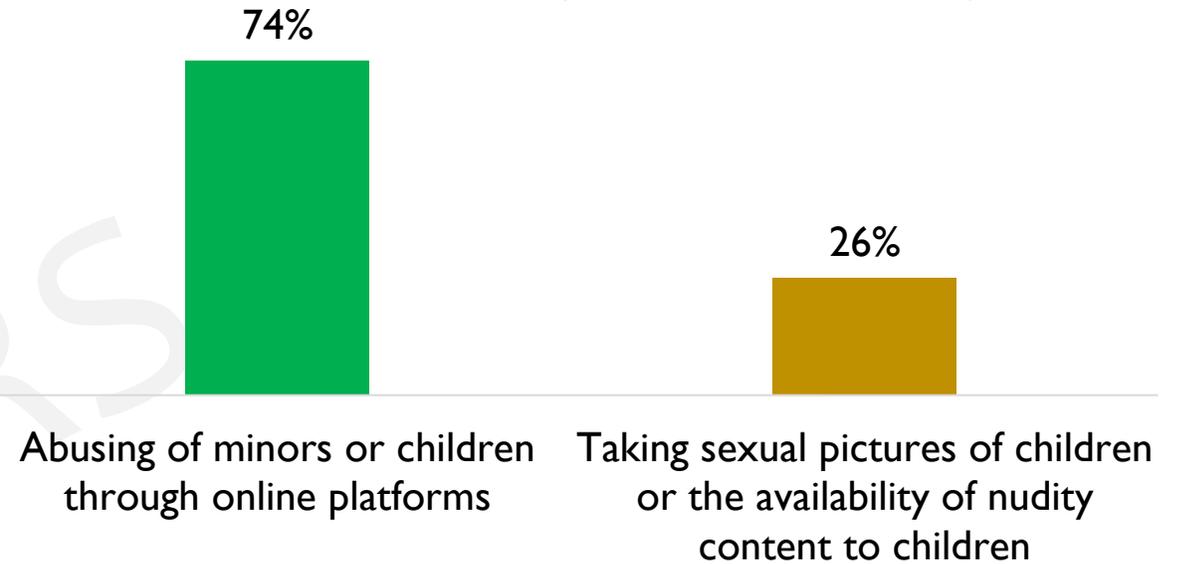


# Knowledge, Attitude and practices of school children regarding OCSEA and online child safety

## Do you know meaning of OCSEA?



## OCSEA Definition (Those who said Yes)



**80%**, n=204 of the learners affirmed to be familiar with the importance of online safety and responsible digital behavior.

**37%** (n=95) of the school children had come across something that had bothered them on the internet.

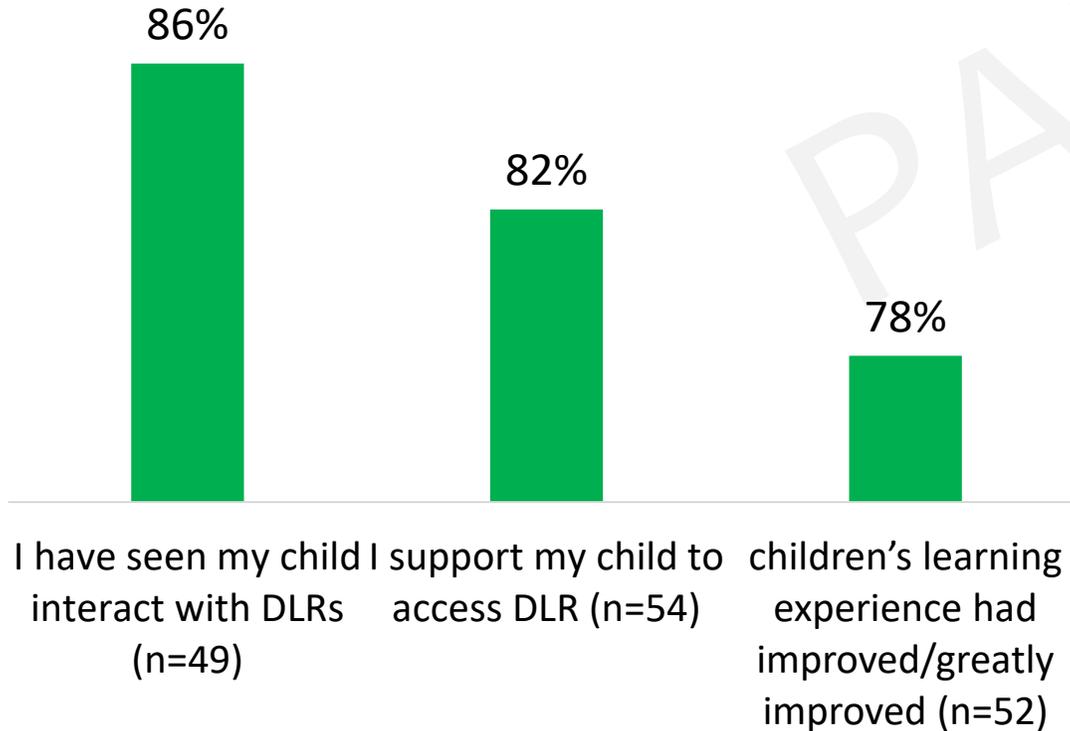
## If yes, what did you come across? (n=95)

|  |     |
|--|-----|
| Sexual images or content                                       | 48% |
| Cyberbullying  | 20% |
| Was sent sexual images or content                              | 18% |
| Pressure from friends to do things I did not want to do online | 12% |
| Saw some horrifying content                                    | 9%  |

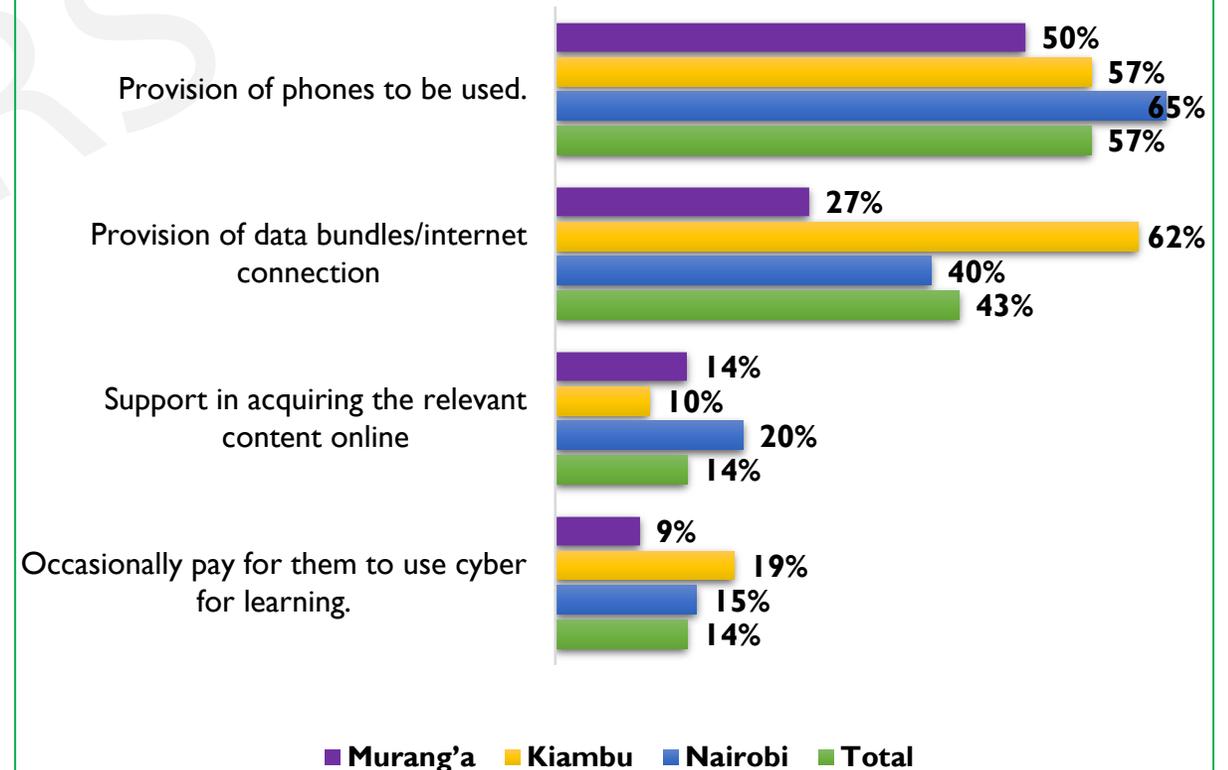
# Proportion of caregivers with increased knowledge, attitude and practices regarding digital learning, OCSEA and online child safety.

## Knowledge, Attitude and practices of caregivers regarding digital learning

### Caregivers perception and support to their children

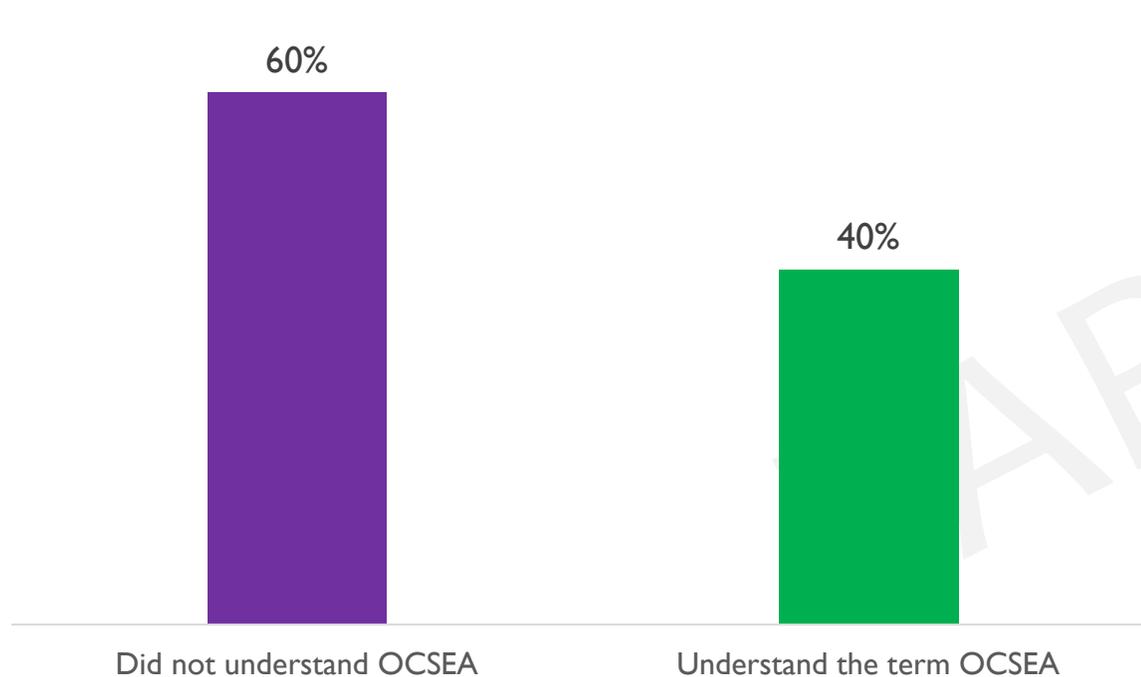


### How do you support your child (ren) in accessing online resources or using digital tools for school work?

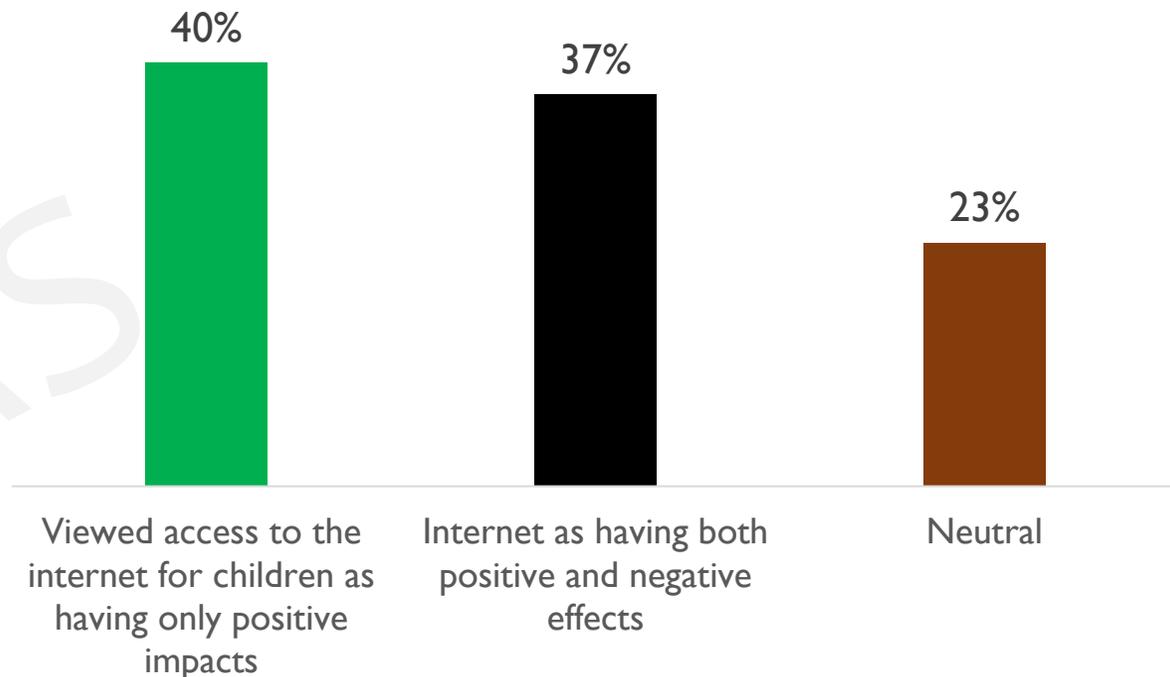


# Knowledge, Attitude and practices of caregivers regarding OCSEA and Online Child Safety

## Understanding of OCSEA



## Caregivers perception about Internet



## Negative Effects of the internet cited by Caregivers

- ❖ Get exposed to adult or inappropriate materials
- ❖ Waste time on the internet,
- ❖ Get exposed to cyberbullying and
- ❖ Internet Addiction.

*“My case was a school where my small kid goes, a child snuck in with a phone to school and showed other children a bad image...but the kids reported to the teacher and the parent to that child was called”* **Caregivers FGD Nairobi**

# Outcome 3

| Outcome   | Indicator  | Definition of Indicator   | Baseline | Target |
|---|--|---|----------|--------|
| <b>Outcome 3:<br/>Improved legal<br/>and policy<br/>environments in<br/>favor of digital<br/>learning</b> | 3.1: Number of digital<br>learning policies<br>developed | These are digital learning<br>policies implemented at the<br>county level by the<br>government (since 2019) | 3        | 2      |

## **Outcome 3: Improved legal and policy environments in favor of digital learning.**

### **These are digital learning policies implemented at the county level by the government (since 2019)**

The study found out that there were no policies and laws at county levels. However, there are multiple policies shaping digital learning environments these included frameworks ranging from laws, regulations, and guidelines that govern use of digital technologies in education in Kenya.

#### **I. National Education Sector Strategic Plan (NESSP) 2023–2027-**

The framework provides for Curriculum Reforms; to meet modern educational needs, such as introducing digital literacy, critical thinking, or life skills development. It also focus on improving teacher training, recruitment, and retention, including efforts to enhance their professional development and working conditions. This Strategic plan policy document outlines key competencies to be achieved and these include communication, collaboration, critical thinking, imagination, creativity, citizenship, learning to learn, self-efficiency, and digital literacy.

#### **Implementation of the Policy**

The County Governments implement the requisites of the NESSP policy by overseeing pre-primary education (Early Child Education), youth polytechnics, home-craft centers and childcare facilities. This is also actualized through investments in infrastructure development by the County and also the support of learners and trainees in charge of ECDE.

# Outcome 3: Improved legal and policy environments in favor of digital learning.

## Cont'

### 2. ICT Education and Training 2021:

This refers to initiatives and strategies aimed at integrating Information and Communication Technology (ICT) into education systems. This policy is anchored on the following 8 guiding principles: inclusivity and equity in ICT to address needs of all learners, provide education that prepares learners to competitively thrive in a technology-oriented and information-based global economy, ensure that ICT systems are safe and secure in education, collaboration, ensure that all learners of different backgrounds, abilities and talents access ICT services, professionalism & Research and innovation.

#### Implementation of the Policy

At the county, ICT in education and training implementation committee comprises of membership from MoE, Teachers Service Commission -TSC, Kenya Association of Technical Training Institutions-KATTI, Teacher Training Colleges -TTCs Rep, University Rep, Kenya Secondary Schools Heads Association -KESSHA, Kenya Primary Schools Head Teachers Association-KEPSHA, Kenya Private Schools Association - KPSA, Technical and Vocational Education and Training -TVET and County Government.

The committee is chaired by the County Director of Education (CDE) with the following roles of the County ICT in education and training implementation committee includes:

- i) Co-ordinate implementation of ICT education & training programmes and activities at the county.
- ii) Monitor and evaluate ICT in education and training programmes and activities in the county;
- iii) Prepare and submit quarterly reports to the MoE and CG on ICT in education and training activities.
- iv) Liaise with the national steering committee and the CG to mobilise resources at the county level.
- v) Promote research and innovation programmes in ICT in education and training in the county .

## Outcome 3: Improved legal and policy environments in favor of digital learning. Cont'

### 3. The National ICT Policy, 2019

This Act recognizes the need for institutions to partner in research and innovation and universal access within an inclusive setting.

#### Implementation of the Policy

This policy was implemented through collaboration between the national and County with the aim of ensuring that all services, both physical and digital reach every citizen at a guaranteed high level of quality inclusive of education services. This is being done through development of County Government Infrastructure Plan

### 4. The National ICT Master Plan, 2014-2017

Its overarching objectives and strategies align with efforts to enhance education through ICT integration in Kenya through the ICT Infrastructure Development, Digital Literacy & Skills Development

### 5. National Curriculum Policy, 2018.

It encourages the integration of technology into teaching and learning processes.

## **Outcome 3: Improved legal and policy environments in favor of digital learning. Cont'**

### **6. The Kenya Institute of Curriculum Development Act, 2013.**

The Act similarly mandates KICD to ensure the quality and relevance of curriculum materials and to promote the use of innovative and technology-driven approaches in curriculum development

### **7. The Science, Technology and Innovation (ST& I) Act, 2013**

Supports and aligns with digital learning initiatives in the following ways

- i) Research and Development in Educational Technology.
- ii) ICT Infrastructure Development
- iii) Digital Skills Development
- iv) Innovation in Education

# Cross-Cutting Research questions

## ***How does socioeconomic status impact access to and utilization of digital learning resources?***

The study established a direct correlation between socioeconomic status and access to and utilization of digital learning resources. For instance, there exists a digital divide among the rural and informal settlement learners.



*“Some learners come to school hungry, some do not have access to modern digital devices at home, this makes them to not be well-informed especially on matters of digital learning”.* **KII HT Murang’a**

## ***How do cultural factors influence the acceptance and adoption of digital learning practices?***

The study found that cultural factors did not exert any negative influence on the adoption of digital learning practices among community members. Throughout the research period, no instances were identified where cultural norms or values discouraged community members from embracing their children adopting digital learning initiatives.

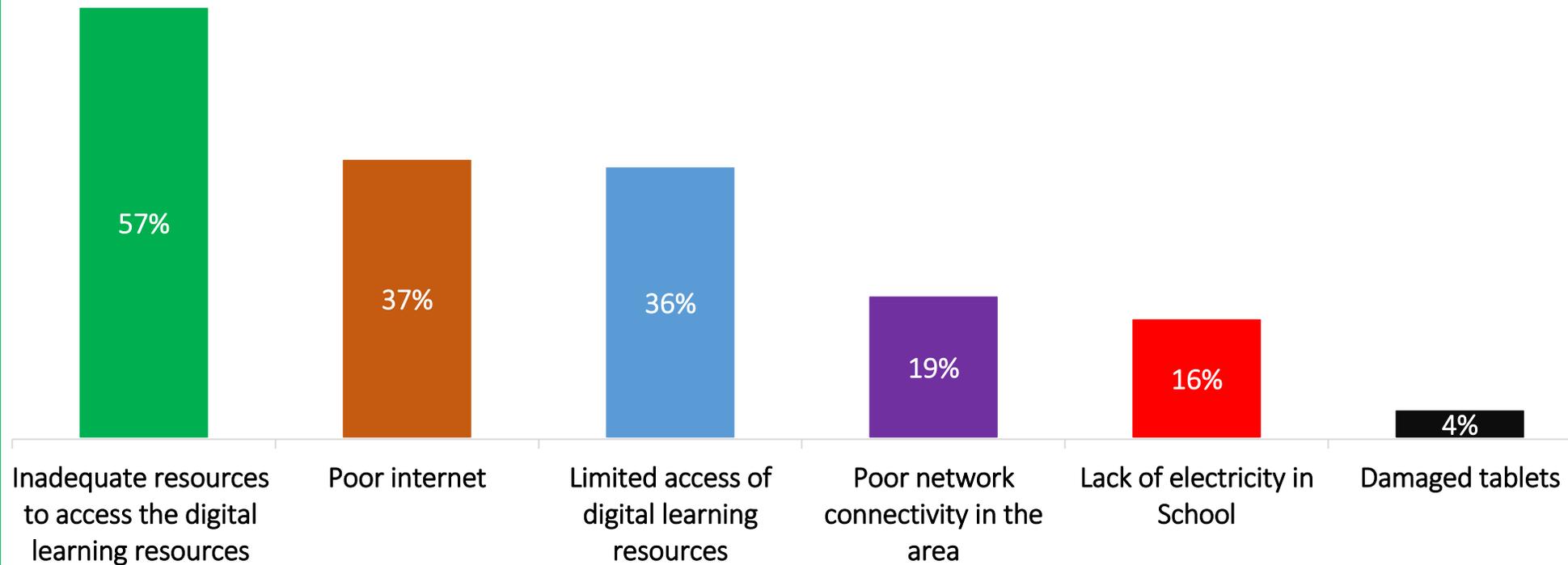


*“The only thing I do not agree with is my child to start embracing the bad things associated with the “West”* **FGD Nderi Caregivers**

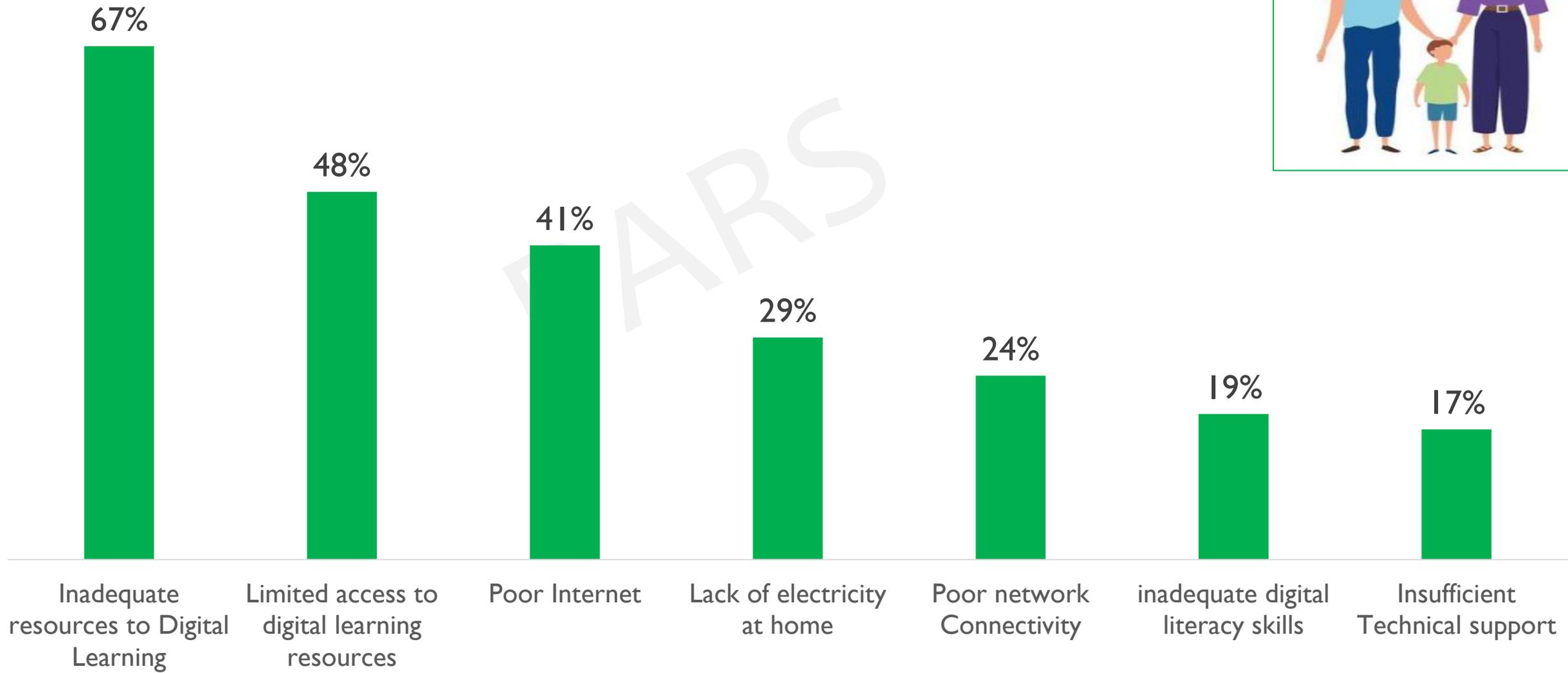
# What are the major barriers to implementing digital learning environments?

## Barriers Identified by Learners

Barriers that inhibit learners access to digital learning, n=255

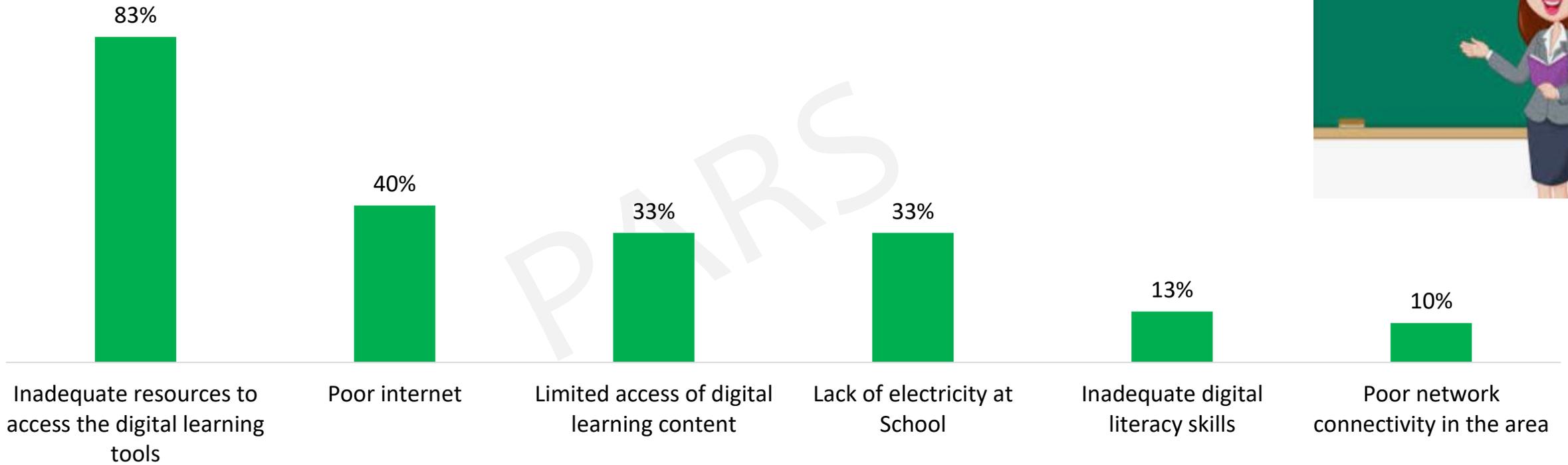


## Barriers to digital learning, n=63



What are some of the challenges learners experience that inhibit their access to digital learning resources?,

n=30



# RECOMMENDATION

| CONCLUSION  | RECOMMENDATION  |
|---|---|
| 1. Proficiency gap among teachers in implementing digital learning.                           | It is imperative for the project to prioritize teacher training within professional development programs focused on digital literacy.   |
| 2. Prevalence of resource scarcity among a majority of caregivers                             | Multi-agency collaborations with local community organizations, NGOs, and businesses to support digital learning initiatives within their locality.                                       |
| 3. Poor Internet access   | It is vital for the project or government to prioritize efforts to facilitate the acquisition of reliable internet connectivity.  |
| 4. Low familiarity with OCSEA -34%  | There is need to enhance educational initiatives focused on online safety, targeting the 66% who are unfamiliar with the term.  |
| 5. Low level of policy awareness among the stakeholders engaged in the survey.                | All education stakeholders should organize for educational initiatives and outreach programs to raise awareness about existing policies through workshops, seminars.                      |
| 6. Inadequate funding from government for device maintenance.                                 | School management boards should proactively allocate internal budgets for device repairs and maintenance.   |
| 7. Insufficient technical support cited by teachers (20%) to strengthen the technical support | There is need to establish dedicated technical support channels within educational institutions to provide teachers with timely assistance for troubleshooting technology-related issues. |
| 8. Low electricity connectivity/frequent power outages in schools                             | There is need for concerted efforts on exploring alternative options such as solar power or portable generators to mitigate the impact of power disruptions                               |



Q

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*Thank  
You!*



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