

REPUBLIC OF KENYA



COUNTY ASSEMBLY OF MURANG'A

THIRD ASSEMBLY- SECOND SESSION

THE SECTORAL COMMITTEE FOR EDUCATION AND CHILD WELFARE.

REPORT ON:

STATUS OF EARLY CHILDHOOD DEVELOPMENT AND EDUCATION DIGITAL
LEARNING PILOT PROGRAM IN THE COUNTY.

Clerk's Chambers,
County Assembly Buildings,
MURANG'A

August 2023

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Hon. Speaker,

On behalf of Members of the Committee for Education and Child Welfare and pursuant to **Standing Order 204(5)**, I beg to table the Committees report on the **Status of ECDE Pilot Digital Learning program, commonly referred to as "The Tayari Program"** in the County.

The Committee on Education and Child welfare was established under Standing Order No.204 and is mandated to deal and consider all matters related to pre-primary education, village polytechnics, home craft centres and child welfare including childcare facilities and any other education support.

1.1 Committee Mandate

The Committee is mandated to do the following: -

1. Investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the department of Education and Technical Training
2. Study the programme and policy objectives of department of Education and Technical Training and the effectiveness of their implementation;
3. Study and review all legislation referred to it;
4. Study, assess and analyze the relative success of the department as measured by the results obtained as compared with their stated objectives;
5. Investigate and inquire into all matters relating to the department Education and Technical Training as they may deem necessary, and as may be referred to them by the Assembly;
6. To vet and report on all appointments where the Constitution or any law requires the County Assembly to approve, except those under Standing Order 198 (Committee on Appointments); and
7. Make reports and recommendations to the Assembly as often as possible, including recommendation of proposed legislation.

1.2 Committee Membership

The Committee consists of the following Members: -

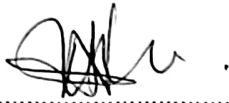
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|---------------------------------|------------------|
| 1. Hon. Naomi Nyambura Maina | Chairperson |
| 2. Hon. Thomas Muteti Mwaura | Vice-Chairperson |
| 3. Hon. Gerald Wambugu | Member |
| 4. Hon. John Kamau Munyua | Member |
| 5. Hon. Hannah Wairimu Kamau | Member |
| 6. Hon. Boniface Ng'ang'a Mbau | Member |
| 7. Hon. Priscilla Njeri Mwangi | Member |
| 8. Hon. Peter Munga Njuguna | Member |
| 9. Hon. Esther Nyawira Kamindo | Member |
| 10. Hon. Grace Nduta Wairimu | Member |
| 11. Hon. Alex Wanyoike Wainaina | Member |
| 12. Hon. Benard Ruiru Njeri | Member |

1.3 Committee Secretariat

1. Francis Kimemia - Senior Clerk Assistant
2. Wema Muthanje -Senior Clerk Assistant
3. Joel Ngugi - Senior Hansard Reporter
4. Julius Njoroge - Sergeant-At-Arms
5. Carol Karugo - Researcher

The Committee wishes to record its appreciation to the Speaker and the Clerk to the County Assembly for facilitating the operations of the committee to compile this report. Further, the chairperson wishes to thank the Committee Secretariat for their dedication and commitment to duty that made the production of this report possible.

Thank You.



SIGNED:

Hon. Naomi Nyambura Maina, MCA.

CHAIRPERSON-EDUCATION AND CHILDWELFARE COMMITTEE

Date 11/8/2023

2.0 EXECUTIVE SUMMARY

EIDU is a technology-supported learning programme that runs on smart devices in ECDE classrooms to enhance learning outcomes.

On the 13th of January 2022, a collaboration agreement was signed between **EIDU Kenya Limited** and the **County Government of Murang'a** to launch a pilot of the EIDU programme to incorporate digital learning and improve the quality of education of ECD learners in the County. The EIDU programme pilot was designed to enhance learning outcomes by providing learner exercises and assessments, teacher training, ECDE Officer training and tools and dashboards for data collection and monitoring.

In order to set up the programme and build capacity within the County, EIDU mobilized resources worth a total of ca. 245,150 Euros (**Kshs 32,000,000**) since the start of the roll-out in April 2022. The EIDU programme pilot has so far impacted 21,474 learners, who have been using the EIDU app with its Digital Personalized Learning exercises and assessments in Mathematics and Language for an average of 3.2 hours every day per classroom in the past 10 months.

The average usage was stable during most months excluding the time of term breaks. Additionally, a total of 773 teachers and 24 ECDE officers were provided with coaching and training, which had a substantial impact on the teachers' and ECDE officers' ability to perform their tasks to improve the quality of education. In January this year, the EIDU programme was rolled out in the rest of the ECDE centres in the County.

The EIDU programme was met with a high level of enthusiasm among learners, parents, teachers and ECDE officers. The adaptation of the programme was very successful as it was an exciting activity for the learners. Based on the very positive feedback from and visible impact on learners, teachers, and government officials, this report recommends to implement the programme fully and integrate it within the county government's long-term ECDE programme plan and consequently in the budget.

3.0 CONTENT AND OBJECTIVES OF THE EIDU DIGITAL LEARNING PILOT PROGRAM

3.1. Content

Hon. Speaker, digital tools and platforms are becoming ever more integral to our children's education. Digital learning increases access to education and knowledge while empowering learners with a mindset and capabilities that set them up for success in their present and future lives.

The program has been developed together with Kenyan teachers and schools to make sure it works for them and is fully approved by KICD, in line with the Competency Based Curriculum (CBC) and multiple studies that has documented its significant learning gains.

Currently, EIDU offers a digital teaching programme for the ECDE teachers: *Tayari* (developed by the Kenyan Ministry of Education), and a digital learning curriculum for the students, containing one billion learning content (a world class education content provider). By integrating EIDU in the classrooms, schools can successfully meet the CBC requirement of digital learning.

3.2 Objective

The objective of the pilot program was to test its effectiveness, feasibility and impact in a real world setting before implementing it on a large scale. Piloting allowed for the validation of the curriculum, the assessment of the applications functionality and usability and the evaluation of the programs overall impact on children learning outcomes.

The insights gained from the pilot phase informed decision making and provided a solid foundation for scaling up the program in the future by ensuring its success in benefiting all ECDE learners in the County.

The ongoing Tayari pilot program in the 160 treatment schools spread across Maragua, Kandara, Mathioya, Ithanga and Gatanga Sub-Counties is already showing promising results after the just concluded midline assessment exercise. End line assessment is scheduled to take place in the second week of term 3, (September 2023).

EIDU is supported by Germany's Federal Ministry for Economic Cooperation and Development (BMZ), Founders Pledge, Jacobs Foundation, the Futures Forum on Learning, and EdTech Hub. In addition, EIDU has received funding from the Bill & Melinda Gates Foundation and has been featured in the Hundred Global Collection 2023 as one of the most innovative education interventions globally.

In Kenya, EIDU is working in collaboration with the Ministry of Education (MoE), the Council of Governors (COG), and the Kenyan Institute for Curriculum Development (KICD).

4.0 PROGRAM DETAILS

On the 13th of January, 2022 a collaboration agreement was signed between EIDU and the County Government of Murang'a to launch a pilot of the EIDU programme to incorporate digital learning and improve the quality of education of ECDE learners in the County.

The collaboration model entailed a number of stakeholders from both the County Government and EIDU. The stakeholders involved are indicated below:

Figure 1: stakeholders involved in the EIDU programme

County Government	EIDU
Governor	Head of Growth, Head of Africa
CECM Education	Regional Manager
CO Education	3 EIDU Officers
Director ECDE	8 EIDU Coaches,
Assistant Director ECDE	operational and technical support staff
24 ECDE Officers	

From the start, both parties worked in close collaboration to implement the program, engaging regularly and proactively. This positive collaboration has been key to the success of the digital learning program.

The programme involves enhancing learning outcomes by providing learner exercises and assessments, teacher training, ECDE Officer training and tools and dashboards for data collection and monitoring. It's composed of the following activities;

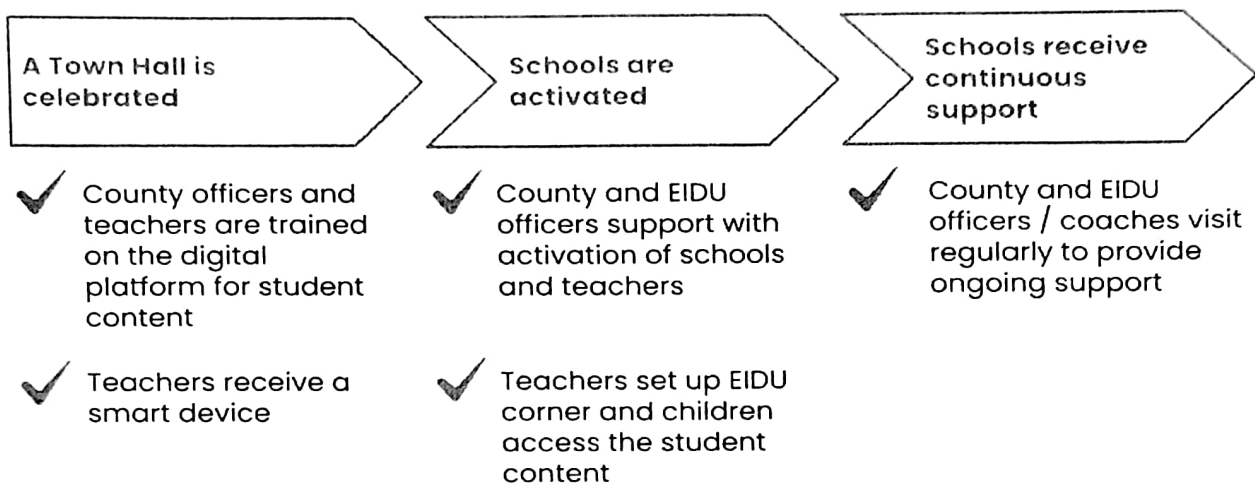
- **Learner exercises and assessments:** Digital Personalized Learning (DPL) content on Mathematics and Language that learners access daily on the smartphone provided in each classroom. The content is approved by KICD and is in line with official policy on CBC and Digital Literacy.
- **Teacher lesson plans:** the schools under the Randomised Controlled Trial (RCT) received teacher lesson plans with the Tayari methodology to implement CBC.
- **Teacher training:** teachers received training on the EIDU programme, Digital Personalized Learning, and their roles in the programme. In the case of the RCT schools, teachers also received training on Tayari teacher lesson plans.
- **ECDE Officer training and tools:** ECDE Officers received training on the EIDU programme and their role in the programme. They were provided with smartphones and a digital tool called "Kocha App" to facilitate their support tasks, including weekly planning of school visits, registration of school visits and feedback, and escalating issues.
- **Dashboards for data collection and monitoring:** Dashboards with weekly progress reports are being shared with the ECDE officers since August 2022.

4.1 Program and implementation status since 2022

The rollout of the programme happened as follows:

1. At the beginning of the programme all relevant County Officers (e.g. ECDE Officers) were trained on the EIDU programme and their relevant support tasks.
2. Subsequently, teachers were trained on the EIDU programme and their role, and given a device for each classroom (assistant teachers use the device given to the main teacher to comply with 1 device per classroom).
3. After the initial training, schools are visited on a regular basis for further support on the integration of the EIDU programme in their classrooms. EIDU Officers and EIDU Coaches supported the County Officers on the ground to ensure a smooth activation of all schools.
4. These school visits also allow the County Officers to monitor and support the implementation of other programmes and initiatives. After activation, school visits continue to provide ongoing support.

Figure 2: roll-out process



Pilot details

The pilot was conducted in the 7 sub-counties of Murang'a East, Kigumo, Gatanga, Kandara, Kangema, Maragua, Mathioya and Kahuro which was rolled out in 2023. The pilot covered a total of 364 ECDE centers and benefited a total of 21,474 learners.

The pilot was rolled out in 3 phases as explained below;

In Phase I the programme was rolled-out to two sub-counties and a total of 331 teachers and 8 county ECDE officers were trained. The pilot was rolled out in 151 schools.

Figure 3: Phase I roll-out

Phase I Rollout					
Sub-county	Teacher Training Dates	Teacher Training Venues	Teachers Trained by EIDU	Total schools	County ECD Officers Trained by EIDU
MURANG'A EAST	28th April	Mbiri Church Hall	172	36	4
	28th April	Mbiri Church Hall		36	
KIGUMO	29th April	Kigumo Primary	159	40	4
	29th April	Kigumo Primary		39	
TOTAL			331	151	8

In Phase II the roll-out involved 1 sub-county. A total of 120 teachers and 4 County ECDE officers were trained. The roll-out was conducted in 53 schools.

Figure 4: Phase II roll-out

Phase II Rollout					
Sub-county	Teacher Training Dates	Teacher Training Venues	Total Teachers Trained by EIDU	Total schools	County ECD Officers Trained by EIDU
KANGEMA	13th July	Muguru Primary	120	53	4

In Phase III Tayari programme was rolled-out to 4 sub-counties. A total of 322 teachers and 12 County ECDE officers were trained. The roll-out was conducted across 160 schools.

Figure 5: Phase III roll-out

Phase III Rollout					
Sub-county	Teacher Training Dates	Teacher Training Venues	Total Teachers Trained by EIDU	Total schools	County ECD Officers Trained by EIDU
GATANGA	9/28/2022	Rubiru primary	81	40	3
GATANGA	10/3/2022	Gati iguru primary			
KANDARA	9/30/2022	Gakarara Primary	80	40	3
MARAGUA	9/30/2022	Makuyu Primary	81	40	3
MATHIOYA	9/29/2022	Kiria-ini Primary	80	40	3
TOTAL			322	160	12

Additionally, EIDU carried out Tayari teacher trainings for 10 days from 9th to 20th January 2023 as shown in the table below

Figure 6: Tayari Teacher Trainings

Sub-county	Total Schools	Total Teachers	Teacher training dates	Training Venue	ECD Officer Trainers	EDU Support Trainers
GATANGA	29	30	9th - 13th January 2023	Mabada NG - CDF - A	2	3
		30	9th - 13th January 2023	Mabada NG - CDF - B	2	3
	11	22	16th - 20th January 2023	Rubiru Primary	1	3
KANDARA	20	40	9th - 13th January 2023	Gakarara	3	3
	20	40	16th - 20th January 2023	Mukerenju	3	3
MARAGUA	20	40	9th - 13th January 2023	Makuyu Primary	3	3
	20	40	16th - 20th January 2023	Maragua tuck hall	3	3
MATHIOYA	20	40	9th - 13th January 2023	Gitugi Primary	3	3
	20	40	16th - 20th January 2023	Kiria-ini Primary	3	3

Currently, all schools are active and the programme is ongoing

5.0 IMPACT AND RESULTS

Quantitative data

The EIDU programme pilot has so far impacted 21,474 learners, who have been using the EIDU app with its Digital Personalized Learning exercises and assessments in Mathematics and Language for an average of 3.2 hours every day per classroom in the past 10 months. However, the usage was not high in the months of December and January due to the long holidays. EIDU recommends a daily average usage of 4 hours and the data indicates good progress in the adoption and usage of the app, since most schools are reaching this threshold.

The average daily usage was 4.6 hours for the highest month (October 2022) and the majority of the months recorded an average of 3 or above hours.

Additionally, the number of active learners was stable during most months excluding the time of term breaks. The stable trend suggests a high adaptation and strong enthusiasm for the programme and a positive impact reducing the rate of absenteeism.

Lastly, a total of 773 teachers and 24 ECDE officers were provided with coaching and training, which had a substantial impact on the teachers' and ECDE officers' ability to perform their tasks to improve the quality of education.

Qualitative feedback

The EIDU programme was met with a high level of enthusiasm among learners, parents, teachers and ECDE officers. The adaptation of the programme was very successful as it was an exciting activity for the learners. Some of the registered benefits for the learners include:

1. The focus on individual learning helps the children to have confidence and self-control
2. The learner exercises act as a motivator to learners in the classroom, improving the class' concentration
3. The learners' spoken English has improved and their vocabulary has widened since instructions on the device are given in English
4. The use of the digital learner exercises has resulted in an improved eye-hand coordination of the learners and better digital literacy
5. The program has nurtured a feeling of self-actualization as they train to learn by themselves (through the Digital Personalized Learning activities)
6. The program also enhances turn-taking in learning activities and the learners get to interact more and know each other as they share the devices

Additionally, there were registered benefits for the teachers as well:

- a) Teachers were motivated because the EIDU programme greatly promoted the implementation of CBC in the classroom. Learners' activities match the days strand and sub strand in the curriculum design, making the teacher's work easier

- b) The EIDU digital programme acts as an assistant teacher as the learners are engaged while the teacher handles the rest of the learners
- c) Teachers appreciated that the EIDU digital learning doesn't interfere with the normal teaching and learning in the class because learners access the devices from an EIDU corner with minimal class distraction even during the transition from one learner to the next.
- d) Reinforces taught content
- e) Makes learning interesting
- f) Boosts learners self esteem
- g) Enhances supervision as its in line with the CBC Digital Literacy

Figure 7: Teacher testimonial

"Our parents are now happy because their learners now can understand language better"



*Teacher
Veronica,
Kaigwa ECD
Murang'a
County, on the
benefits of EIDU*

Lastly, the ECDE Department also registered benefits:

- ECDE officers appreciated the continuous support offered by EIDU to ensure the success of the pilot
- ECDE officers leveraged the training received to enhance their tasks
- The digital tool (the "Kocha App") facilitated ECDE officers' monitoring and evaluation tasks

5.1 Estimated cost of program implementation in 2024

The estimated budget is Kshs 700 per learner in 2023-2024 (due to the introduction of Tayari lesson plans for teachers) and Kshs 600 per learner in subsequent years. However, for the totality of Murang'a County's ECDE population of 38,171, the estimated cost of the program for 2023/2024 is Kshs 24,800,000 and Kshs 12,400,00 annually thereafter.

The breakdown of suggested budget lines is as follows:

Figure 8: Budget Estimation to implement the program from January 2024

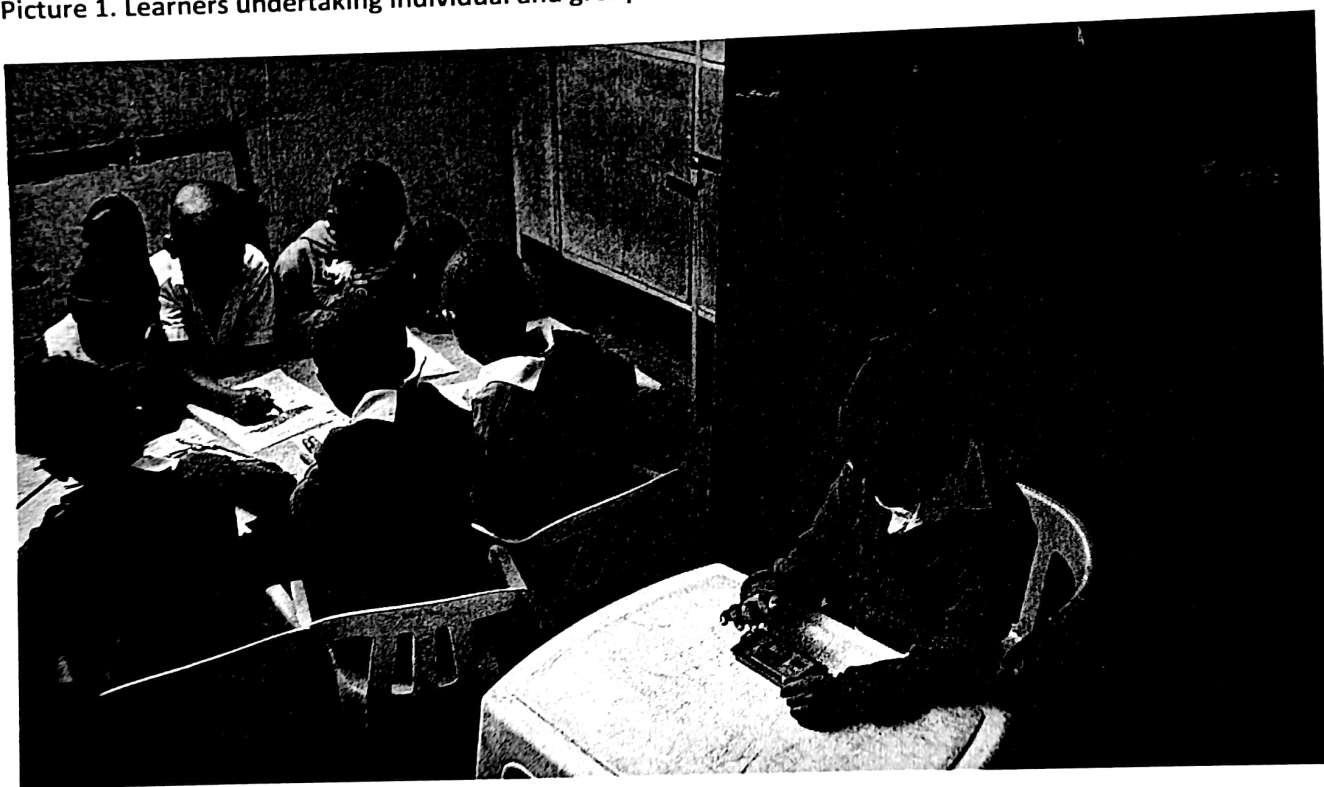
Budget line	2023	2024-2027 (each year)
Teacher and ECDE officer training and capacity building	350 + 40 KES	40 KES
Monitoring and quality assurance	160 KES	160 KES
Digital learning hardware and maintenance	250 KES	250 KES
Digital learning software and maintenance*	150 KES	150 KES
Teacher and learner materials	- (big books covered by EIDU)	-
Total	950 KES	600 KES

* To be paid to EIDU directly

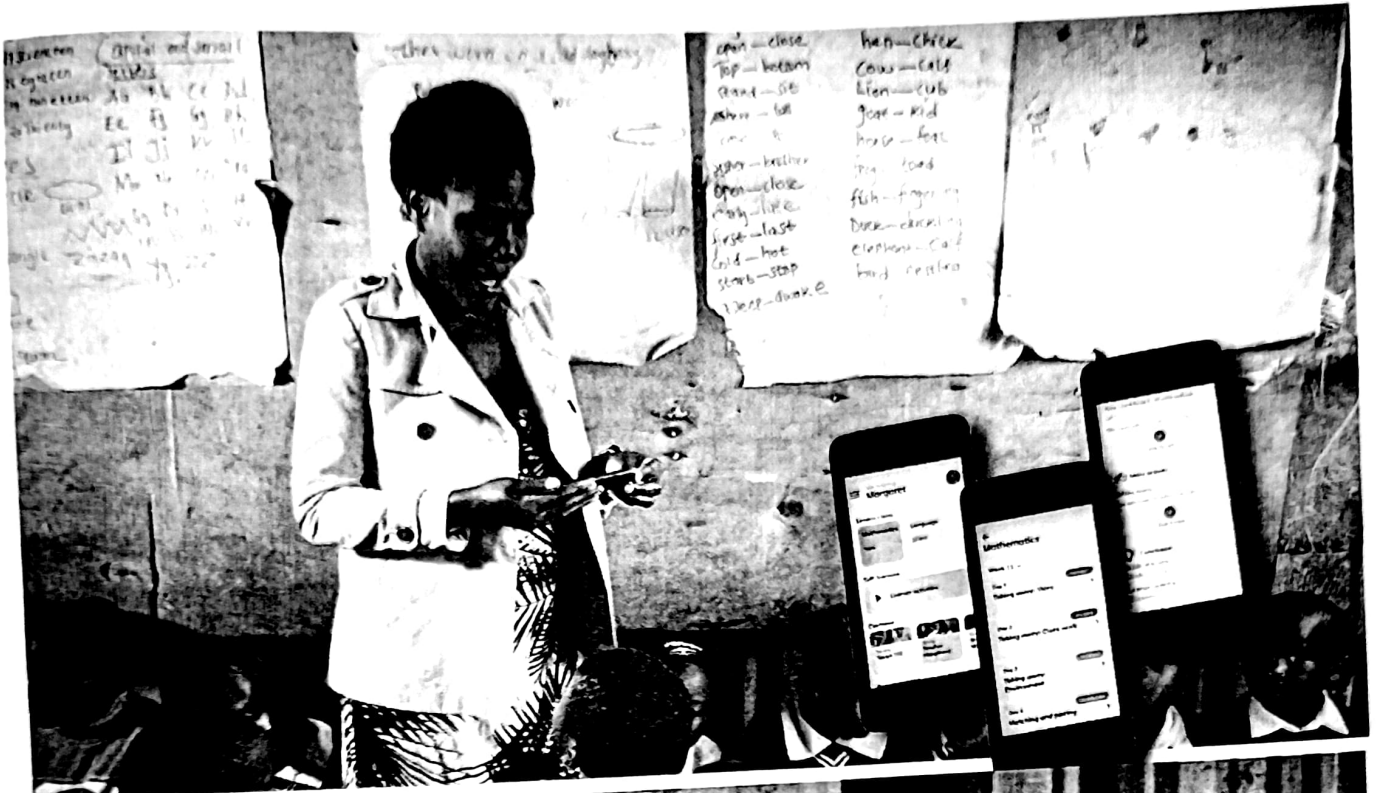
NB: As the pilot program is coming to an end in December 2023, the County Government is expected to sign a new memorandum and fund the program by October 2023.

5.2 PICTORIAL ILLUSTRATIONS OF THE PROGRAM

Picture 1. Learners undertaking individual and group activities



Picture 2: Teachers Digital Lesson Plan using the Tayari Program



6.0 COMMITTEE FINDINGS AND OBSERVATIONS

The committee observed as follows;

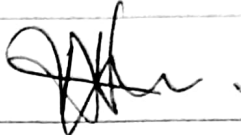

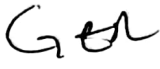


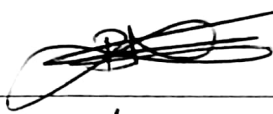




1. **That**, the Tayari program is a good intervention in ECDE Digital Learning as its anchored on the CBC curriculum developed by the Kenya Institute of Curriculum Development
2. **That**, the EIDU ECDE digital learning program offers a holistic and digital approach to improve learning outcomes. It's an open digital platform that excites children and gets them school ready, is affordable and is in line with official Ministry of Education policies on CBC Digital Literacy.
3. **That**, ECDE Officers are required to visit all schools to ensure a successful implementation, but visiting schools in remote areas become a challenge due to transport costs being higher than what is covered by EIDU's monthly transport reimbursement.
4. **That**, some teachers were promoted to support the programme and conduct ECDE Officer visits, but they have not found a replacement for their classes so they perform both roles (report to school until 11.00am and then do ECDE Officer school visits). This results in teachers not getting the required mentorship and support.
5. **That**, there is lack of electricity connection in some of the ECDE Centres causing a barrier to keeping the devices fully charged when needed.
6. Large classrooms. EIDU recommends 1 device per 30 to 40 learners, but several PP1 and PP2 classrooms registered more than 40 learners, which posed a challenge for sharing one device per classroom.
7. That most ECDE teachers are aged and not tech savvy that led to challenges in adapting to the EIDU app and the device.
8. That monitoring devices used by teachers have a very small screen hence posing a challenge in operation due to various activities required to be carried out during support.

7.0 COMMITTEE RECOMMENDATIONS

1. **That**, based on the success of the pilot and the substantial gains that the EIDU programme has achieved, the committee recommends the continuation of Digital Learning program in all ECDE centres in the County.
2. **That**, as the current Memorandum of Understanding (Agreement) between EIDU and the County Government of Muranga is coming to an end in December 2023, the County Executive Committee Member for Education and Technical Training do include a total of Kshs 25,000,000 (Twenty five million only) through a Supplementary Budget in order to facilitate, finance, and run the EIDU programme as EIDU's donor funding to support the pilot is not going to last beyond December 2023.
3. **That**, within 60 days after the adoption of this report, the County Executive Member for Education and Technical Training initiates formal procedures for a seamless transition of the program to the County Government for timely continuity and operational efficiency.
4. **That**, the ECDE teachers selected to supervise the program be replaced to ensure they can successfully perform their new roles.
5. **That**, the County Government in collaboration with relevant state agencies do fastrack connection of electric power to all public ECDE centres for charging of the digital devices.
6. **That**, by October 2023, the Department of Education and Technical Training procures new digital devices to increase the number of devices in the large classrooms to achieve the ratio of 1 device for every 30 learners.
7. **That**, within 60 days after adoption of this report, a training program be undertaken for training and coaching of all ECDE teachers to improve their digital skills.
8. **That**, ECDE officers be issued with bigger devices for monitoring, supervision and support of the proram.

8.0 ADOPTION OF THE REPORT

We, the Honorable Members of the Committee on for Education and Child welfare do hereby affix our signatures to this report to affirm our approval and confirm its accuracy, validity and authenticity.

S/NO	HON. MEMBER	SIGNATURE
1	Hon. Naomi Nyambura Maina	
2	Hon. Thomas Muteti Mwaura	
3	Hon. Gerald Wambugu	
4	Hon. John Kamau Munyua	
5	Hon. Hannah Wairimu Kamau	
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