DigiTruck Digital Literacy Skills Program

2024

Quantitative and Qualitative Evaluation of The Kenya Program

ICT Authority
REPUBLIC OF KENYA

MINISTRY OF YOUTH AFFAIRS, CREATIVE ECONOMY AND SPORTS
REPUBLIC OF KENYA

NATIONAL YOUTH COUNCIL

Kenia
Kenya National Innovation Agency

HUAWEI

CLOSE THE GAP
BRIDGING THE DIGITAL DIVIDE

CFSK
COMPUTERS FOR SCHOOLS KENYA
Propelling Kenya in the Digital Age

Table of Contents

List of Figures

EXECUTIVE SUMMARY

1.1 Background Information

The Kenya DigiTruck is a collaboration between the Ministry of Information, Communications & the Digital Economy through the ICT Authority, the Ministry of Youth Affairs and Creative Economy through Kenya National Innovation Agency and National Youth Council, Huawei, Safaricom, GSMA, Close the Gap, Computers for Schools Kenya and National Government Affirmative Action Fund.

DigiTruck conducts free training on digital skills targeting the youth. The DigiTruck is a mobile classroom with solar power, laptops, smartphones, internet connectivity and an Idea hub (smart screen) for teaching that goes to rural Kenya to train youth on digital skills, with each receiving approximately 40 hours of training.

The training covered computer basics, internet search, email communication, basic coding, digital marketing, typing skills, basic website creation, finding jobs online, creating graphics/posters, creating CVs, creating presentations, creating and formatting documents, creating and using spreadsheets and graphs, and online safety, password protection and avoiding online fraud. The aim is to enable Kenyan youth to be safe online, study online, find work online, trade online and earn income from digital and digitally enabled jobs in the gig and freelancing economy.

H.E President of The Republic of Kenya William Ruto, together with Commonwealth Secretary
General interacting with students in the DigiTruck

Since 2023 an Innovation Competition is organized, encouraging the students to consider how they will use their new skills to enhance their own business, set-up a new business, or help others. The best entrants are rewarded with a tablet and internet data bundles to help them implement their idea.

The main objective of the study was to assess the impact of DigiTruck skills training, relevance to job markets, and to also assess their employment status. The specific objectives of the study are as outlined below:

a. To understand the **digital skills acquired** by the youth through the training.
b. To **identify gaps** remaining in training offered.
c. To assess the number of trainees who **are working or earning after participating** in the DigiTruck digital skill training program.
d. To make **recommendations for improving future training** programs

The study employed a dual-method approach, comprising of both quantitative and qualitative methodologies. The quantitative randomly targeted respondents aged 18 years to 35 years, from those counties where DigiTruck trained the youth reaching almost 800 youth out of the 4,000 trained, with a mix of those trained recently and those trained earlier on in the program (3+ years ago). Typical training was provided in twenty 2-hour classes over 20 working days, though during COVID-19 fewer students were in the DigiTruck and they received less training.

The sample was meant to allow for a more robust analysis based on demographics, specifically: age, gender, geographical location, and other key demographics. Qualitative study focused on Nyeri, Bomet, Mombasa, Busia, Nyandarua and Vihiga county.

1.2 Study Findings

1.2.1 DigiTruck Training

Most Liked Aspects of the Training

The training content (40%) stands out above all other attributes in all categories followed by the trainers (19%), practical sessions (16%) and content relevant to job market (12%). Across gender, Females had higher mentions of liking the training content (42%) and trainers (24%) while males (17%) had slightly higher mentions of liking the practical sessions as compared to females (15%). The older generation mentioned liking the training content as compared to the other age groups.

Figure 1: Most Liked Aspects of the Training

Most liked aspects of the training (single mention)
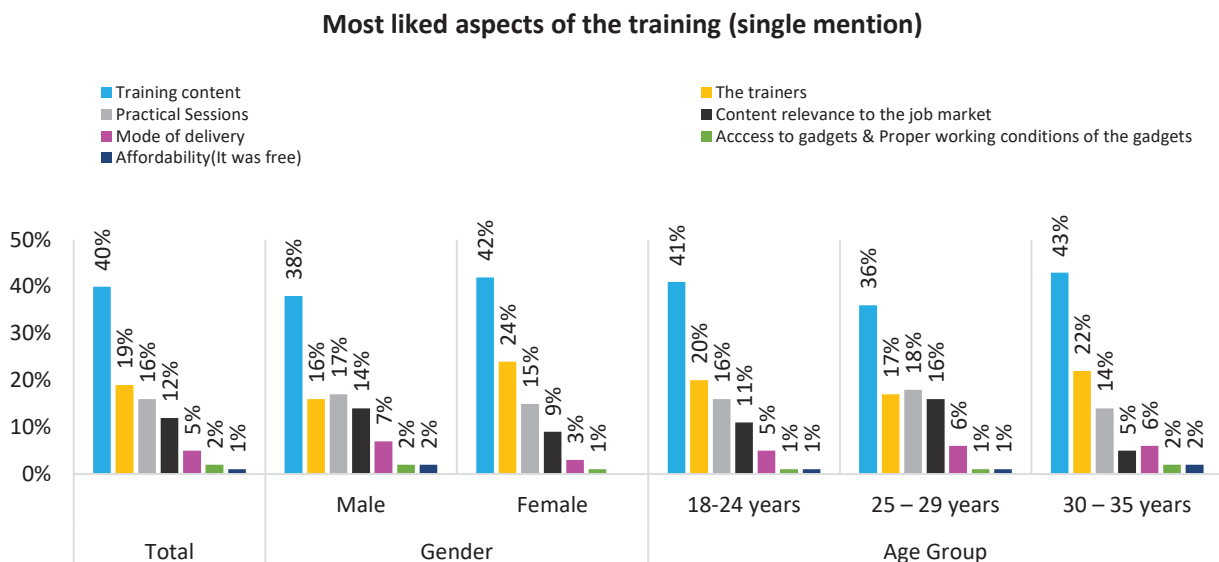
Q. What did you like the most about the training?   Base =782 (All respondents)

Qualitative research revealed the trainers face a difficult balance meeting the needs of diverse trainees; some wanted more time on basic skills whilst others wanted more advanced skills for example. The trainer is unable to provide individualized support or experience for 20 trainees at a time.
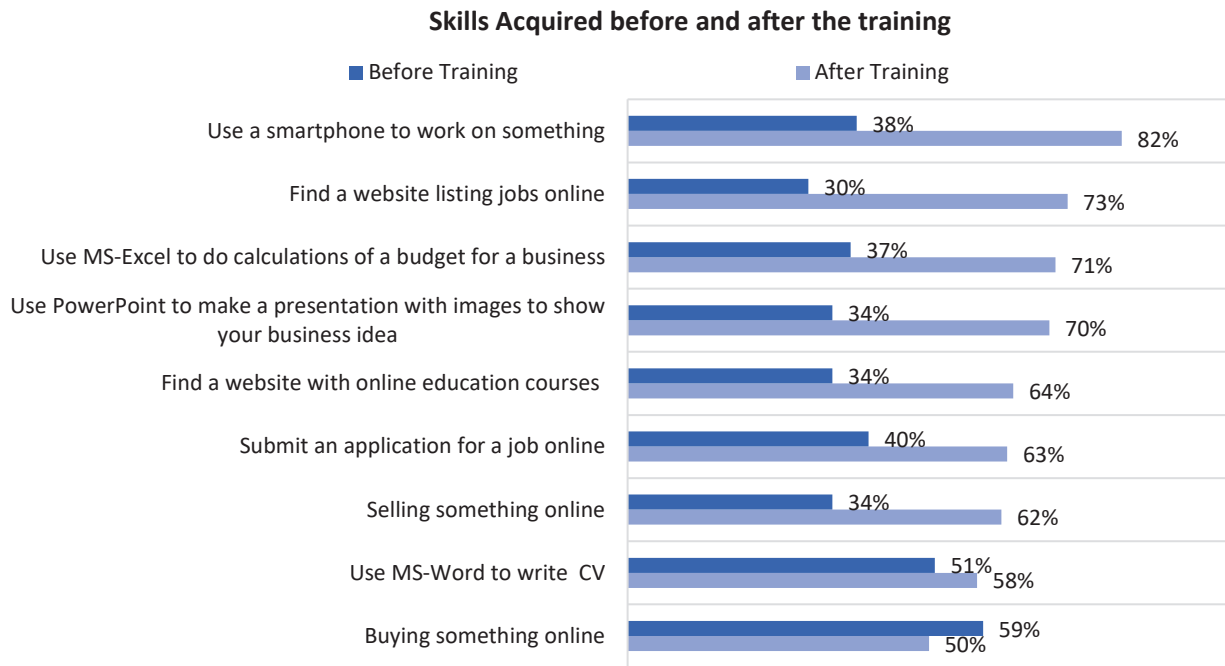
Computer Literacy

"There is this advanced skill that I would wish that they introduce of computer repair and maintenance this will help many youths to get employment because these electronic devices have so many issues and it is also very easy for someone to get employed or self-employed working as a computer technician."

FGD respondents, Mombasa & Busia County

Benefit of Training

After completing the program, significantly more respondents could use their smart phone for tasks (82% compared to 38% beforehand), find job listings on websites (73% compared to 30% beforehand), manage budgets using spreadsheet software (71% to 37% beforehand), make presentations to show a business idea (70% to 34% beforehand), find a website for online learning (64% to 34% beforehand), and sell something online (62% to 34% beforehand). Many also reported improved communication skills (16%), time management (14%) and interpersonal skills (14%).

Figure 2: Skills acquired before and after the training

Skills Acquired before and after the training

■ Before Training   ■ After Training

Skill	Before Training	After Training
Use a smartphone to work on something	38%	82%
Find a website listing jobs online	30%	73%
Use MS-Excel to do calculations of a budget for a business	37%	71%
Use PowerPoint to make a presentation with images to show your business idea	34%	70%
Find a website with online education courses	34%	64%
Submit an application for a job online	40%	63%
Selling something online	34%	62%
Use MS-Word to write CV	51%	58%
Buying something online	59%	50%

Q. Before the training were you able to…?
Q. After the training were you able to…?   Base =782 (All respondents)

Online Safety

Overall, 75% of the respondents felt confident in accessing the internet safely and avoiding online threats after the training. However, when asked on specific aspects of online safety, only 23% felt they could safely use passwords, only 19% felt able to protect themselves against online threats malware and viruses, and only 18% reported being aware of phishing and other online scams. This indicates more can be done in online safety.

Desired Computer-related Skills for Continued Learning

General computer and computer packages such as document processing, spreadsheets and presentations (29%) were the top most mentioned skills. Programming and coding and web development and design were slightly more popular among males than females while females show a slightly higher interest in data handling and analysis than males. Age-wise, the 30-35 age group is more interested in general computer skills and computer packages than the other age groups.

Figure 3: Desired Computer-related Skills for Continued Learning

Desired Computer-related Skills for Continued Learning

Legend:
- ■ General computer and computer packages
- ■ Web Development and Design
- ■ Data handling and analysis
- ■ Programming and Coding
- ■ Digital Marketing, networking and Online Business

	Total	Male	Female	18-24 years	25 – 29 years	30 – 35 years
General computer and computer packages	29%	29%	29%	29%	28%	38%
Programming and Coding	14%	18%	9%	14%	15%	15%
Web Development and Design	13%	14%	12%	12%	15%	17%
Digital Marketing, networking and Online Business	11%	11%	11%	12%	11%	7%
Data handling and analysis	10%	8%	12%	10%	9%	11%

Categories: Total | Gender | Age Group

Q. What other computer related skills do you feel you need to learn next?   Base =782 (All respondents)

Qualitative research indicated that advanced training content is desired and what was proposed by the respondents ranges from programming, data analysis and visualization, cyber security, graphic design, website development among others to cater for the demand in the job market.

Programming Skills

"There is just a concept known as programming. I do not know much about it, but I feel going forward it should be included."

FGD respondents, Nyeri & Bomet County

Data analysis and Visualization

"Also, I think that data representation with packages such as Power BI."

FGD respondents, Nyeri & Bomet

Cyber security

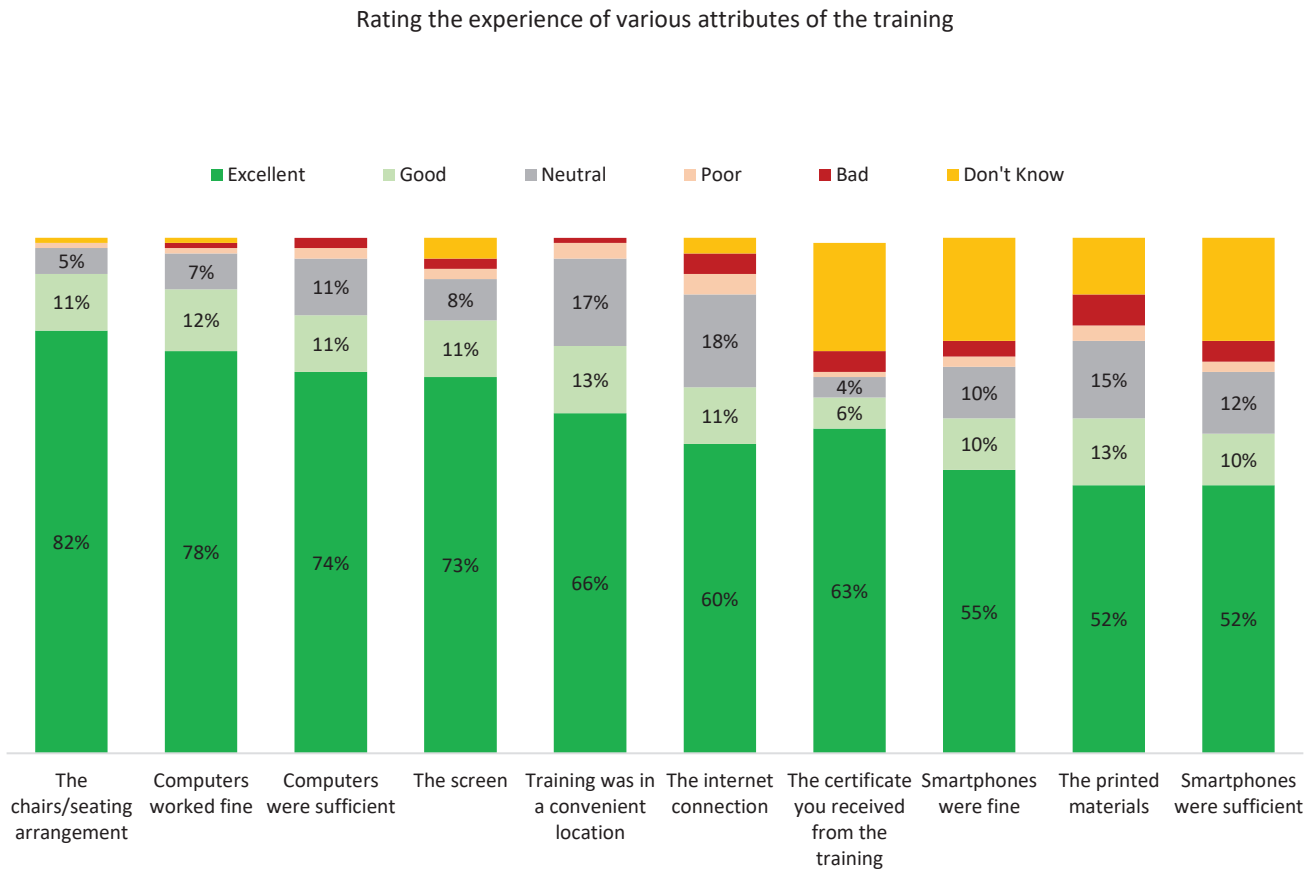"Maybe on cyber security you know individuals need to be taught how to un-hack something; you might be doing something important online then someone hacks your work it becomes so difficult to un-hack and maybe the account you have has some very important documents, you end up abandoning the account and yet it was very important to you."

FGD respondents, Mombasa & Busia County

Rating the Experience of Various Attributes of Training

Overall, the experience was above average across all attributes, suggesting a high level of satisfaction among the respondents. The top five attributes, rated as excellent or good, were the chairs/seating arrangement (93%), computers working well (90%), sufficient computers (85%), screen (84%), and training being in a convenient location (79%).

*Figure 4: Rating the Experience of Various Attributes of Training*

Rating the experience of various attributes of the training

Legend: Excellent · Good · Neutral · Poor · Bad · Don't Know

Attribute	Excellent	Good	Neutral
The chairs/seating arrangement	82%	11%	5%
Computers worked fine	78%	12%	7%
Computers were sufficient	74%	11%	11%
The screen	73%	11%	8%
Training was in a convenient location	66%	13%	17%
The internet connection	60%	11%	18%
The certificate you received from the training	63%	6%	4%
Smartphones were fine	55%	10%	10%
The printed materials	52%	13%	15%
Smartphones were sufficient	52%	10%	12%

Q. Please rate the experience you had from 1-5…   Base =782 (All respondents)

The positive aspects of the trainers' performance reflect a commendable commitment to effective teaching methodologies. Their dedication, professionalism, and subject matter expertise contributed significantly to fostering a positive learning environment. The trainers' ability to accommodate diverse learning styles and maintain flexibility were particularly significant.
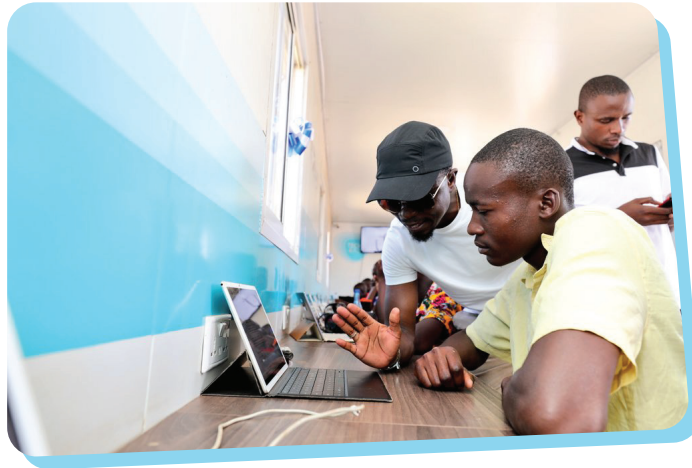
Kenya's Cabinet Secretary for Youth Affairs, Creative Economy and Sports interacting with a student in the DigiTruck

Confidence and Professionalism

"The subject matter experts whatever they told us, like they were sure what they were teaching us."

FGD respondents, Nyeri & Bomet County

Dedication and Support

"They were also determined and patient. They will make sure you understand and where you do not understand, they will give you the right information and easily understand."

FGD respondents, Vihiga & Nyandarua County
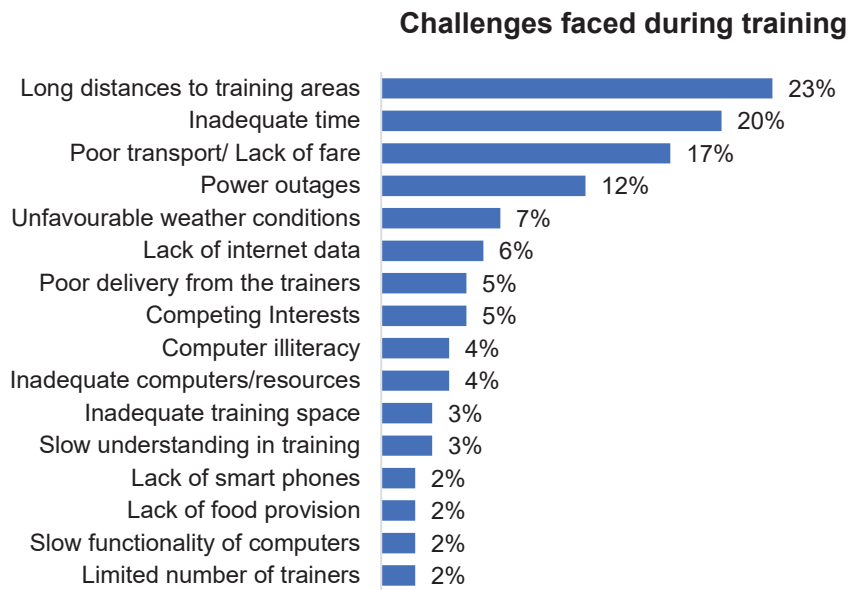
Challenges faced during Training

Less than half of the respondents (47%) mentioned that they have faced challenges during the training, with higher mentions among males than females and the older generation.

The top five challenges that the respondents have faced during training include: long distances to training areas (23%), inadequate time (20%), poor transportation (17%), power outages (12%), unfavorable weather conditions (7%).

Students posing for a photo in front of the DigiTruck

Figure 5: Challenges faced during training

Challenges faced during training

Challenge	Percentage
Long distances to training areas	23%
Inadequate time	20%
Poor transport/ Lack of fare	17%
Power outages	12%
Unfavourable weather conditions	7%
Lack of internet data	6%
Poor delivery from the trainers	5%
Competing Interests	5%
Computer illiteracy	4%
Inadequate computers/resources	4%
Inadequate training space	3%
Slow understanding in training	3%
Lack of smart phones	2%
Lack of food provision	2%
Slow functionality of computers	2%
Limited number of trainers	2%

Q. What challenges did you face during the training?   Base =782 (All respondents)

Qualitative research indicated the proposed duration of training should range between one month to three months with an average of two hours per session. A considerable number of respondents favored morning hours, particularly between 8 am to 10 am, although some also highlighted preferences for midday and afternoon sessions.

Some of the equipment provided during training were not in good condition, and though frequently replaced, they should be so more promptly to ensure smooth operations and maximize productivity.

Addressing these challenges require a comprehensive approach, including the exploration of alternative training locations, flexible scheduling, collaboration with local transportation services, investment in reliable power sources, and the implementation of contingency plans and virtual training options to curb the challenges.

Sharing of skills
Majority reported to have shared skills with others specifically basic computer operations to advanced tasks like creating databases, using excel, presentations and conducting assignments using software like Microsoft Word and PowerPoint. The estimated number of individuals with whom the respondents have shared the skills they acquired varies significantly. Estimates range from just one person to over a hundred, with the majority falling between 2 and 20 people.

> **Estimate of people the skills were shared to**
>
> "I am saying in the office where I was, there were around 5 people who I helped, since I had not finished school, there were students that I also helped and they were around 15 plus. I used to help them write their essays."
>
> *FGD Respondents, Nyeri, & Bomet County*

> **Methods Used**
>
> "Showing them how to do assignments with Microsoft Word on how to present their work."
>
> *FGD Respondents, Nyandarua, & Vihiga County*

> **Methods Used**
>
> "To my family members I started with the introduction to computers and the most basic one is Microsoft Word it was like a whole topic to elaborate on the whole package. For my classmates if there is something or a question one finds difficult in Excel I think that is one I have come across most of the time; to help them solve Excel questions."
>
> *FGD Respondents, Mombasa & Busia*

Willingness to Pay for training

This was explored in qualitative research. Whilst respondents expressed a willingness to pay for training, but some mentioned limitations in their ability to pay the full amount upfront. They express a desire for flexible payment frequencies such as weekly, bi-weekly, or monthly installments. When considering the course cost, participants show a preference for paying smaller amounts in full and larger amounts through installment plans.

A considerable number of trainees have advocated for a percentage-based payment model aligned with the funding provided by the organizers. Suggestions include paying 50% of the total upfront and the remaining 50% upon completion of the training. Additionally, there have been proposals for flexibility, allowing payments of 30%, 50%, or a specific range between KSH 1,500 and KSH 2,000 towards the total amount.

> **Amount Preferred**
>
> "From Kshs 1500 based on the price they put to be convenient for all people."
>
> *FGD Respondents, Nyandarua, & Vihiga County*

> **Amount Preferred**
>
> "When a certain percentage has been catered for me I think I can pay the remaining percentage like 30% or 50% of the amount required."
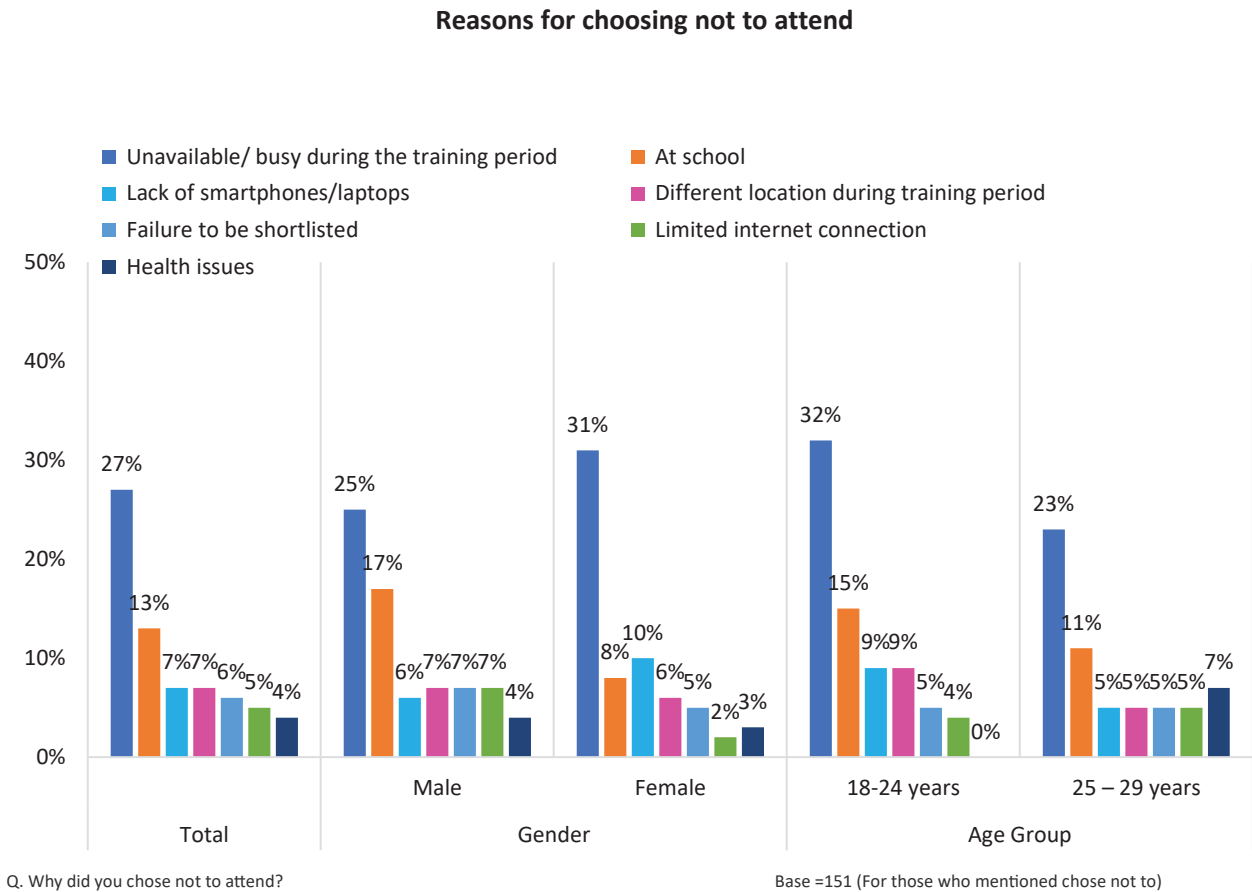>
> *FGD Respondents, Mombasa & Busia County*

1.2.2   DigiTruck Innovation Competition

Participation

The primary reason for not attending the competition was unavailability/busyness (27%) during the training period, affecting a significant portion of the respondents, especially females and the younger generation, followed by being at school (13%).

Figure 6: Reasons for not attending the innovation competition

Reasons for choosing not to attend

Q. Why did you chose not to attend?   Base =151 (For those who mentioned chose not to)

Idea Development from Application Forms/Process

Among the respondents who participated in the DigiTruck competition, almost one-half (49%) indicated that the application process helped them with idea generation, particularly among males (49%) and those aged between 25 to 35 years. 61% reported that they implemented the idea.
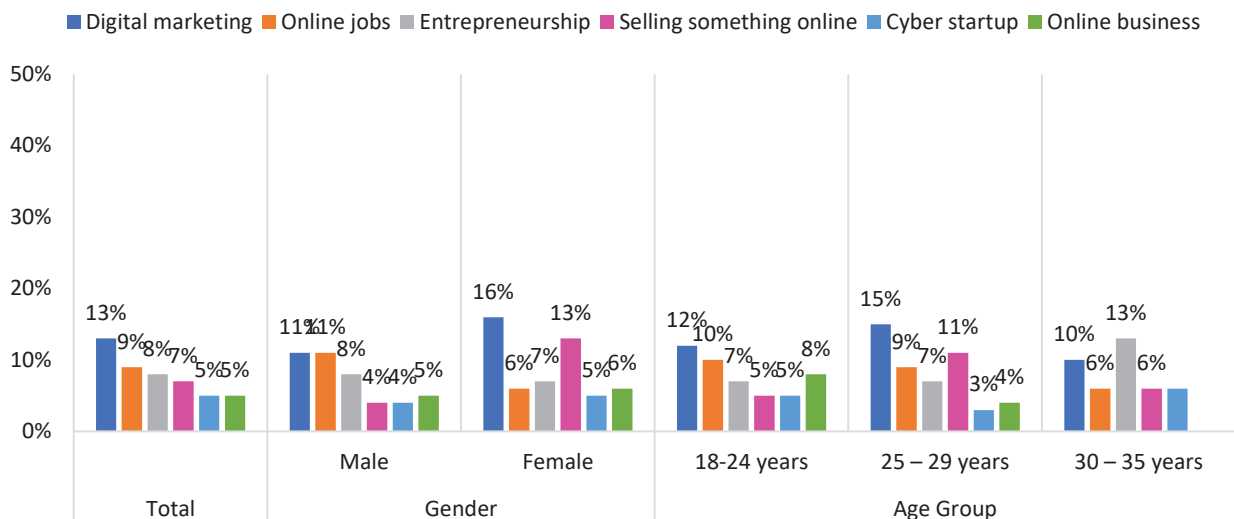
Ideas Developed

Digital marketing (13%) is the most popular idea generated by the trainee followed by online jobs (9%) and eCommerce (7%). Females showed a higher interest (13%) in selling something online compared to males

(4%) while males express a slightly higher interest (8%) in starting a cyber startup compared to females (5%). Across the age group, the youth have higher interest in digital marketing while older generation have higher interest in entrepreneurship. The competition helped them increase their online presence (30%), grow their business (24%) and increase their incomes (18%), however lack of finances (25% of competition participants) to implement their idea was a barrier to greater impact.

DigiTruck graduates posing for a photo

Figure 7: Thematic areas for ideas developed

Thematic areas for ideas developed

■ Digital marketing ■ Online jobs ■ Entrepreneurship ■ Selling something online ■ Cyber startup ■ Online business
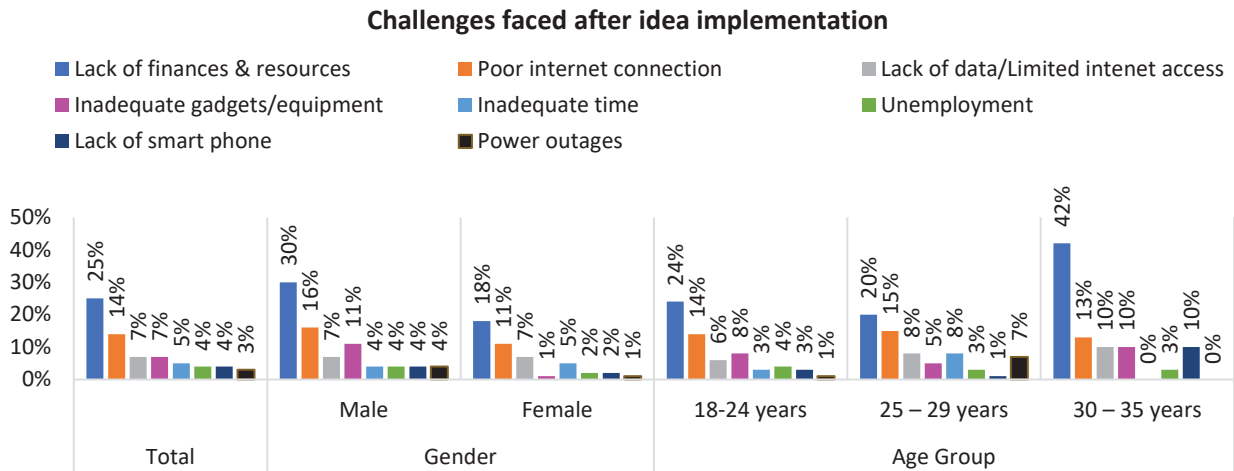
Q. What are some of the ideas you developed?   Base =220 (Those who developed ideas)

Challenges faced after Idea Implementation

Lack of finance and resources (25%) was the top challenge faced by respondents after implementing their ideas, followed by poor-quality internet connection (12%) and the absence of internet access (9%).

Figure 8: Challenges faced after idea implementation – Quantitative findings

Challenges faced after idea implementation

Legend:
- Lack of finances & resources
- Poor internet connection
- Lack of data/Limited internet access
- Inadequate gadgets/equipment
- Inadequate time
- Unemployment
- Lack of smart phone
- Power outages

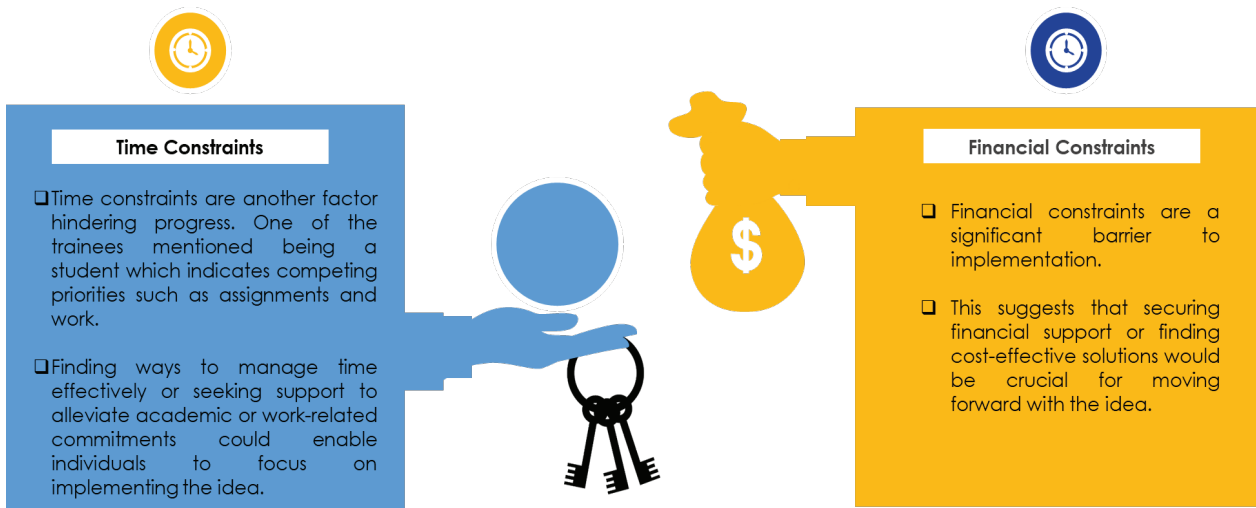| Group	Lack of finances & resources	Poor internet connection	Lack of data/Limited internet access	Inadequate gadgets/equipment	Inadequate time	Unemployment	Lack of smart phone	Power outages
Total	25%	14%	7%	7%	5%	4%	4%	3%
Male	30%	16%	7%	11%	4%	4%	4%	4%
Female	18%	11%	7%	1%	5%	2%	2%	1%
18-24 years	24%	14%	6%	8%	4%	3%	3%	1%
25 – 29 years	20%	15%	8%	5%	8%	3%	1%	7%
30 – 35 years	42%	13%	10%	10%	0%	3%	10%	0%

Q. What challenges have you faced?   Base =220 (Those who developed ideas)

Qualitative research shows that time constraints, particularly for students juggling academic responsibilities and work commitments. In addition, financial constraints pose significant challenges to implementing ideas effectively.

*Figure 9: Challenges faced after idea implementation - Qualitative findings*

Time Constraints

❑ Time constraints are another factor hindering progress. One of the trainees mentioned being a student which indicates competing priorities such as assignments and work.

❑ Finding ways to manage time effectively or seeking support to alleviate academic or work-related commitments could enable individuals to focus on implementing the idea.

Financial Constraints

❑ Financial constraints are a significant barrier to implementation.

❑ This suggests that securing financial support or finding cost-effective solutions would be crucial for moving forward with the idea.

DigiTruck Digital Literacy Skills Program

1.2.3   Impact on Employment Status

Enhancing employability

More than half (57%) of the participants indicated that the digital skills training enhanced employability (with more females (63%) than males (53%) indicating this). In addition, digital skills training enhanced employability of those aged 18 and 29 years as compared to those aged 30-35 years, at 60% and 33% respectively.

Figure 10: Percentage of those the digital skills training enhanced their ability to get a job

% of those the digital skills training enhanced their ability to get a job
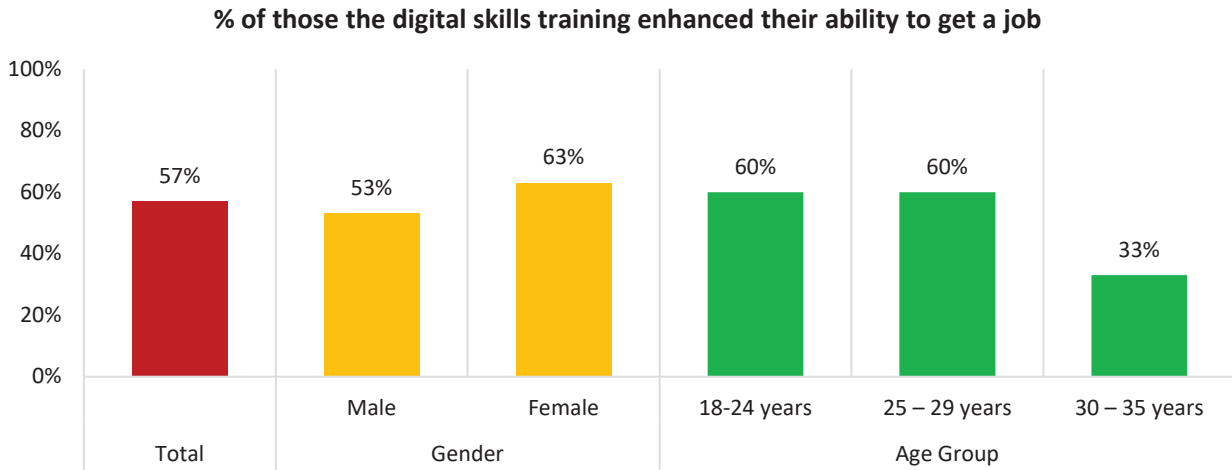
Q. Did the digital skills training enhance your ability to get a job?   Base=111(Currently employed after training)

Qualitative discussion indicated that the skills offered by DigiTruck have primarily contributed to employment opportunities. The respondents mentioned the ability to apply for online jobs such as transcribing, online writing, and database management, running cyber-related enterprises, and online marketing among others indicating an expanded job market beyond traditional employment settings.

> **Diversification of Job Opportunities**
>
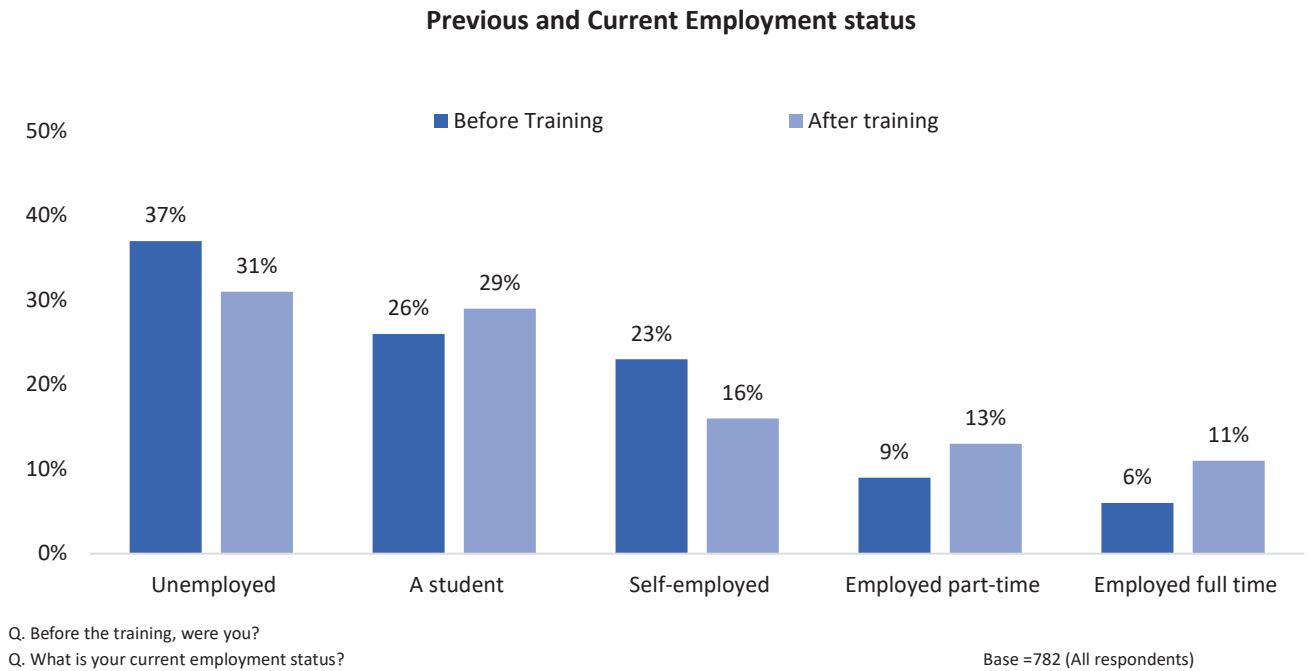> "It helped me to an extent whereby, when I'm seeking jobs online like transcribing, and online writing it helped me a lot because I was taught how to create and format a document very well and that is one of the skills required when you go for online writing jobs."
>
> ***FGD Respondents, Mombasa & Busia County***

Shift in Employment Status

Amongst the participants, the unemployment rate declined 6% and self-employment rates declined 7%; meanwhile the rates of those studying increased 3%, those employed part-time increased 4% and those employed full-time increased 5%
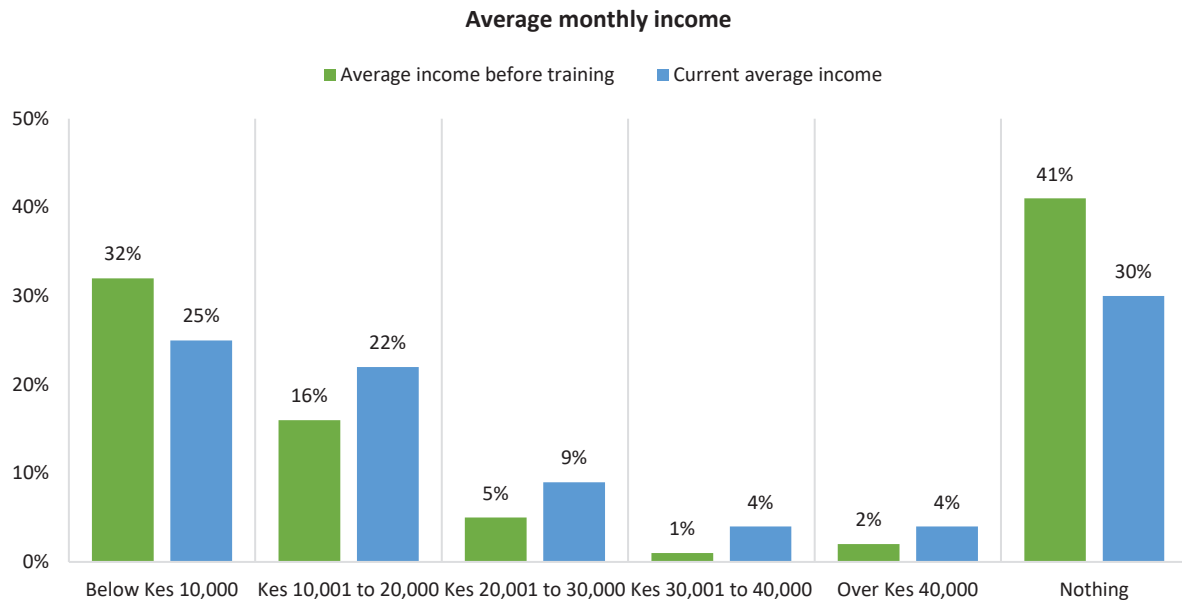
Figure 11: Previous and current employment status

Previous and Current Employment status

- Before Training
- After training

	Unemployed	A student	Self-employed	Employed part-time	Employed full time
Before Training	37%	26%	23%	9%	6%
After training	31%	29%	16%	13%	11%

Q. Before the training, were you?
Q. What is your current employment status?

Base =782 (All respondents)

Amongst the participants, those earning nothing declined 11% and those earning below Ksh 10k per month declined 7%; meanwhile those earning between Ksh 10k-20k increased 6%, those earning between Ksh 20k-30k increased 4%, those earning between Ksh 30k-40k increased 3% and those earning over Ksh 40k increased 2%.

The DigiTruck in a remote village in Kenya

DigiTruck Digital Literacy Skills Program

Figure 12: Average monthly income

Average monthly income

■ Average income before training ■ Current average income

Q. What was your average income before DigiTruck training? Q. What is your average monthly income?   Base =782 (All respondents)

35%	93%	79%
Reported that the change in income was due to starting a business with their new digital skills	Reported the skills enhanced their ability to do work	Have helped others gain digital skills.

1.3 Study Recommendations

Training Content

Advanced Skills Content

- **Specialized Tracks:** Offer specialized and optional modules within the training program to allow learners to focus on areas of interest or relevance to their career goals. This may entail splitting the learners into smaller groups after the general training

- **Hands-on Projects:** Incorporate practical projects and real-world simulations to reinforce theoretical knowledge and enhance skill application.

- **Guest Lectures and Industry Insights:** Invite experts from respective fields to deliver guest lectures and share industry insights, providing valuable perspectives and networking opportunities.

- **Advanced skills:** Focus on training on more advanced skills that are high in demand in the job market such as Artificial Intelligence and Data Analysis skills.

Improving CV Writing Content

- **Continuous Practice:** Encourage regular practice sessions to refine CV writing skills and enhance proficiency in formatting and language usage.

- **Feedback Mechanism:** Establish a feedback system where learners can receive constructive criticism on their CV drafts, helping them identify areas for improvement.

- **Stay Updated:** Keep the training content updated with current industry standards and trends in CV writing to ensure relevance.

Internships

- Facilitate partnerships between educational institutions and companies to offer internship and apprenticeship opportunities. These hands-on experiences will allow the youth to gain practical knowledge, build networks, and enhance their employability.

Trainers Performance

- **Training methodology:** Offer periodic assessments or quizzes to gauge understanding and provide feedback for both trainers and students. Incorporate practical sessions. Encourage ongoing communication channels for students to seek clarification or additional support outside of scheduled sessions.
- **Individualized attention:** Ensure all participants understand the material by providing personalized support and addressing individual needs.
- **More time for practical sessions:** Allow adequate time for participants to practice and apply the learned skills using devices and software.
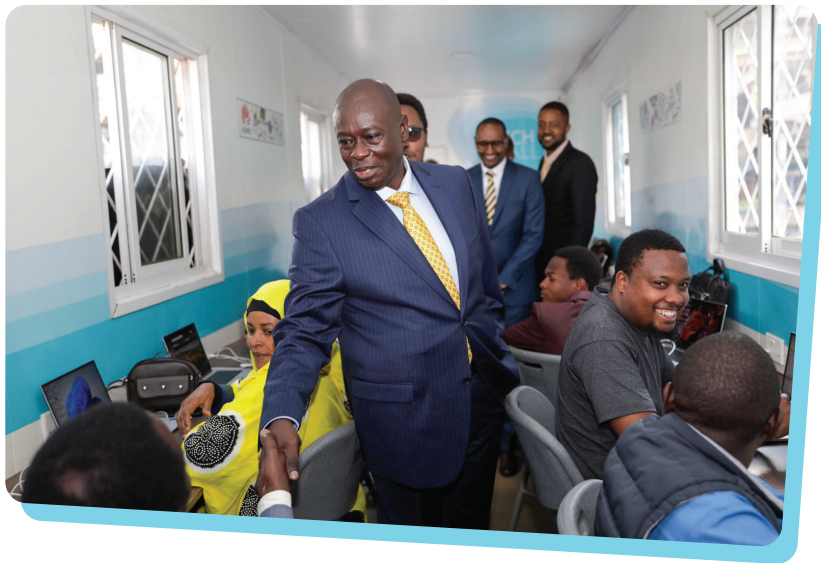
H.E Deputy President of the Republic of Kenya interacting with students in the DigiTruck

Infrastructure and Logistics Improvements:

Address logistical challenges comprehensively by
- **Access to locations:** Exploring alternative training locations or collaborating with local transportation services to get students to arrive at the central location
- **Reliable power**: Investing in reliable power sources and having contingency plans
- **Repair or Replace Faulty Equipment:** Prioritize repairing or replacing malfunctioning smartphones and laptops to restore functionality. Engage with IT support or relevant vendors to swiftly address these issues and minimize downtime.
- **Accessibility:** Provide laptops to participants for use during and after training, facilitating continuous practice and skill development.

DigiTruck Competition

- **Promotion:** Intensify promotional efforts for future competitions, targeting specific demographics and utilizing effective communication channels. Trainers should employ diverse persuasive strategies to increase awareness and participation. Highlight success stories to inspire others and showcase the practical benefits of participating in the competition.
- **Scheduling**: Address scheduling conflicts by exploring alternative timeframes for competitions or considering a staggered competition schedule to accommodate diverse participant availability.
- **Application Process as an Ideation Tool:** Review reasons why the ideation forms are not considered relevant.
- **Ongoing Support:** Foster a supportive environment for idea implementation by providing resources, mentorship, or networking opportunities.
- **Competition Post-Implementation:** Establish support mechanisms for winners, such as access to funding, mentorship programs, or partnerships with investors. Address infrastructure challenges by exploring collaborations with internet service providers and offering technical assistance.

Impact on Employment Status

- **Employability:** Strengthen partnerships with local businesses and industries to create more job opportunities for trained individuals.
- **Entrepreneurship**: Consider implementing entrepreneurship-focused modules or partnerships with local businesses to create opportunities for income generation.
- **Industry relevance**: Continue aligning training content with industry requirements to ensure relevance. Consider incorporating feedback mechanisms to gather insights from employed participants and make iterative improvements to the training content.
- **Partnerships with Employers:** Collaborate with local businesses, organizations, and employers to develop customized training programs that address their specific skill requirements. Establishing partnerships can also facilitate job placements and internships for DigiTruck trainees, enhancing their employment prospects.