STEM BOOTCAMP FOR KIDS

REPORT

31/08/2022 – 09/09/2022

VENUE: PUBLIC SERVICE INSTITUTE OF NIGERIA, KUBWA (PSIN)

NiTDA
National Information Technology Development Agency

NCAIR
NATIONAL CENTER FOR ARTIFICIAL INTELLIGENCE & ROBOTICS

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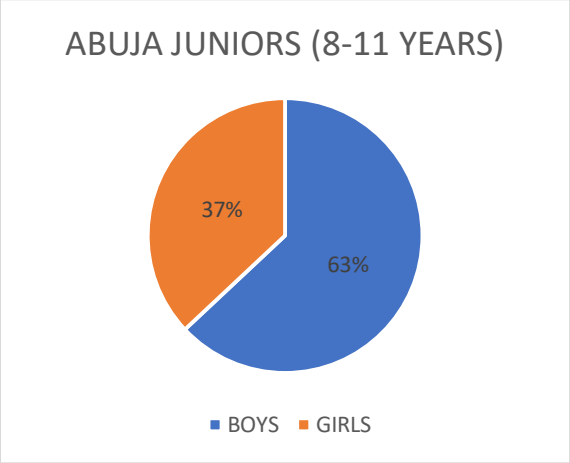
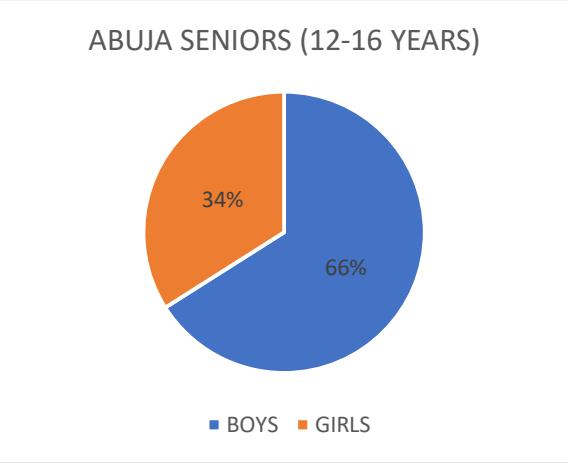
INTRODUCTION

The National Information Technology Development Agency (NITDA) through its subsidiary, the National Center for Artificial Intelligence and Robotics (NCAIR), embarked on a two-week training for kids on STEM Education, which is a yearly initiative, normally conducted during the summer school holidays.

This year, the program was conducted between 31st August and 9th September in two batches of 146 junior kids and 152 senior kids, who were trained in the intellectual and intensive exercise. The first batch engaged youngsters between the ages of 8 and 11 years, while the second batch was for youngsters between the ages of 12 to 16 years.





JUNIORS (8-11 YEARS)		
Boys	Girls	TOTAL
92	54	146

SENIORS (12-16 YEARS)		
Boys	Girls	TOT`AL
101	52	153

They were immersed in various activities, learning various technologies and skills ranging from Artificial Intelligence (AI), Robotics, Drones, Coding, Virtual Reality (VR), 3D printing, and digital communication, where participants were trained on how to tell their stories digitally using video and audio, including adding digital effects to their creations to make them more interesting and impacting.

During the entire program, skilled NCAIR interns took them through various technologies, on a journey requiring critical thinking and a high sense of curiosity in the world of science and digital technologies.

The quality of education, especially Science, Technology, Engineering, and Mathematics, is deteriorating in our country, as evident from the recent performance of students in major

national examinations. As we match towards the fourth industrial revolution (4IR), there is a need for a new strategy and innovative approaches to STEM education, such as the introduction of Artificial intelligence (AI), Robotics, the Internet of Things (IoT), and other emerging technologies into our educational system.

The kids were kept in an intensive engagement over the last two weeks in the Science, Technology, Engineering and Mathematics (STEM) program organized by NITDA through NCAIR, with the arm to drive R&D and Innovation in the emerging technologies areas.

OBJECTIVES

- To enhance the digital literacy and skills of young Nigerians
- To inspire young Nigerians to pursue a future career in digital technologies
- To prepare young Nigerians as technology and innovation leaders.
- To increase the entrepreneurial potentials of youngsters in the digital technology space

ARRIVALS AND REGISTRATION

The kids arrived at the venue and were registered according to their numbers, placed in clusters, and given tags with colors that corresponded with their cluster numbers. 146 were present for batch A while 152 were present for batch B program. The tags were useful in identifying the clusters and moving them to the next class on the timetable. At 10:00 a.m., the participants were seated and registration began at 10:30 with the successful candidates submitting their participation email for registration. Ms. Blessing Daniel and Ms. Sewuese Agev, on behalf of the National Director, introduced all stakeholders present, including supervisors, instructors and volunteers.

The National Director welcomed all students and stakeholders and announced the commencement of the program. He encouraged the children to take advantage of the opportunity and grasp as much knowledge as they could from the program. He advised them to aspire for greatness and aim to be innovative.

PROGRAMS

In the first and second week, the subjects taught are shown in the table below;

WEEEK 1	WEEK 2
ARTIFICIAL INTELLIGENCE	**ARTIFICIAL INTELLIGENCE**
ROBOTICS & DRONES	**ROBOTICS & DRONES**

CODING (SCRATCH)	CODING (PYTHON)
DIGITAL COMMUNICATION	DIGITAL COMMUNICATION
INTERNET OF THINGS (IOT)	INTERNET OF THINGS (IOT)
EMBEDDED SYSTEMS (EVIVE)	EMBEDDED SYSTEMS (ARDUINO)
VIRTUAL REALITY	VIRTUAL REALITY
3D PRINTING	3D PRINTING

CLOSING CEREMONY

The closing ceremony was held on the 10th of September 2021. The Director-General of NITDA was present with other Directors and staff. The top-performing students along with their parents/guardians were invited to the closing ceremony. The National Director of NCAIR gave a welcome address, with the Director-General of NITDA giving his own remarks and words of wisdom to the children. The Head of Innovation and Prototyping (I&P), NCAIR gave the closing remarks. Prizes and certificates were presented to the top-performing youngsters and a tour of the innovations created was given. Lunch was served after the tour to mark the end of the ceremony.

DIRECTOR-GENERAL'S REMARKS

The Director-General of NITDA, Mallam Kashifu Inuwa, gave an appraisal in his remarks during the closing ceremony at the Public Service Institute, Abuja. He said the training had entrenched in its participants required technological know-how in line with the National Digital Economy Policy and Strategy of the Federal Government. The DG stated that the agency had continued to play a central role in assisting and encouraging young tech innovators in Nigeria. He further disclosed that there was the need for a new strategy and innovative approaches to STEM education into the Nation's educational system.

He encouraged the children to continue practicing what they have learned as they return to school, and also encouraged them to make use of the NITDA Academy virtual learning platform. He further encouraged them to make use of the opportunity for Nano Internships at the National Centre for Artificial Intelligence (NCAIR), where they can continue to develop their ideas.

He ended by reiterating that the early involvement of youngsters in technology and innovation will accelerate the development of the technology sector and create future leaders who will transform the Nigerian technology space and boost the Nigerian Digital Economy.

AWARDS & PRIZES

A rigorous process was put in place to select ten (10) winners, that is five (5) from each batch out of all the youngsters trained. At the event, best-achieving kids received awards and appreciation from NITDA. The first three (3) from each batch received a laptop, while all the ten (10) selected winners received a STEM kit that will help them with their STEM education journeys.

All youngsters present at the boot camp were presented with attendance certificates while all the volunteers and instructors were presented with certificates of appreciation.

Presenting the awards, the Director-General of the Agency, Mallam Inuwa Kashifu said the STEM Bootcamp for Kids (SB4Kids) is part of NITDA's effort towards implementing the National Digital Economy Policy and Strategy (NDEPS), particularly the NDEPS's pillar – Digital Literacy and Skills

TOUR OF INNOVATIONS

A tour of the innovations was given to all present at the ceremony and these innovations include:

- IOT home assistance
- Embedded systems (Evive and PictoBlox)
- AI facial recognition
- Digital communication video made in class using Adobe Premier
- Robotics (Otto and Spider robots assembly)
- Drone technology (Mini drone assembly and beta flight)
- 3D-printed humanoid

VOTE OF THANKS

The vote of thanks was given by the Head of Innovation & Prototyping at NCAIR, Mr. Ahmed T. Ishaq. He gave his appreciation to the management of NITDA, NCAIR, volunteers, instructors and parents, and also congratulated the children. He, together with Engr. Yau Isa Garba, directed the guests and dignitaries to the exhibition section for a tour presented by participants of the NITDA SB4Kids.

CONCLUSION

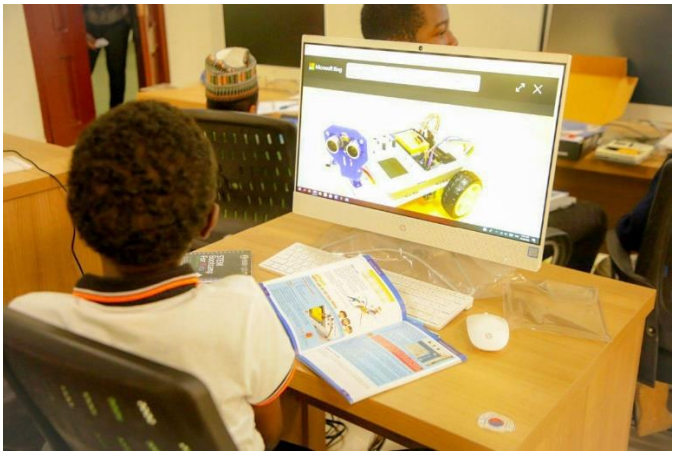
Finally, the Boot Camp for Kids is an excellent project to continue to raise public awareness about the importance of creativity and innovation in all aspects of human development. This type of innovation is critical for unlocking a country's economic potential.

It is also an opportunity for major stakeholders in the ICT ecosystem, both in the private and public sectors, to collaborate and develop synergy.

Finally, the event was a success, with all of the goals met.

APPENDIX


TOMMY HILFIGER




Nigeria – Korea
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Cooperation
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10.03.2015
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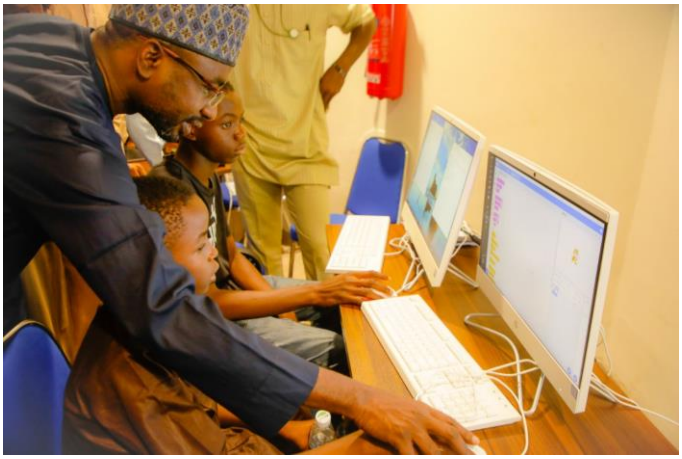


Stem
Bootcamp


Stem
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31st Aug to 10th Sept


for Kids
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Activities :
Virtual Reality


for Kids