



CODING

The skill of the future...

**Institute of ICT Professionals Ghana
in collaboration with
Netguard Academy**

www.iipgh.org



David Gowu
Executive Director,
Institute of ICT Professionals
Ghana (IIPGH)



ICT SKILLS DEVELOPMENT PROGRAM

Unemployment is ranked as the 1st and 2nd most important problem among urban and rural Ghanaians respectively. In 2016, the World Bank estimated that 48% of youths between 15 and 24 years are jobless. With the introduction of free Senior High School, this number is expected to increase.

However, the emerging digital economy presents a huge prospect to reduce unemployment. With the move towards digitization worldwide, more people including those living in developing countries are participating in the digital economy. The digital economy is going to be even bigger with the commercialization of digital technologies such as artificial intelligence (AI), Data Science, blockchain, cloud computing, Internet of Things (IoT), machine learning (ML) and mobile applications. This presents opportunities for transforming our economy which will make us competitive in West Africa and allow young people to find decent jobs or start their own businesses.

That said, there is a substantial challenge. There is a huge skills gap. It is worrying that our youth, including those with formal education, do not have the right skills to take up jobs in a digital economy. The only way to bridge the gap between the challenge and this immense opportunity is to train young people in these technologies.

The Institute of ICT Professionals, Ghana (IIPGH) is a professional association of over 1000 members with the aim of connecting relevant stakeholders in order to create a vibrant ICT ecosystem. The Institute has four divisions, one of which is the Academy division which is focused on providing ICT Skills development. So far, as part of its early start program, IIPGH and its operational partner NetGuard Group have trained over 218 young people in coding (computer programming) as it forms foundation of these emerging technologies.

We believe that with the right training, Ghana shall become competitive in the area of attracting foreign direct investment. The country will also be productive by utilizing ICT as the government continues its digitization effort. Furthermore, skills in emerging ICT technologies will provide work at home and abroad for our youth as technology has made working remotely an attractive solution.

ABOUT THE INSTITUTE



The Institute of ICT Professionals, Ghana (IIPGH) is a non-profit professional Association which is made up of professionals in various domains of Information and Communication Technology (ICT) practice. The Institute is a connector of ICT professionals from Government MDAs, educational institutions, corporate organizations, start-ups, investors and the civil society organizations to create a vibrant ICT ecosystem.

The organization aims at using its platform to equip professionals and students with skills in emerging technologies needed for entrepreneurship and employment in today's fast moving technological world. In addition, use the expertise at its disposal to advice government and other stakeholders on best practices and public policies that would enable the use of ICT in achieving the Sustainable Development Goals (SDGs).

Visit our website: www.iipgh.org for more information

Contact: 024 277 3762 / 024 435 7006

Email: info@iipgh.org



PRACTICAL SKILLS TRAINING CATALOG;

ICT Skills for Juniors

- Coding for kids
- Computer programming for Teenagers
- Basic Computer Skills

ICT Skills for Graduates & Professionals

- Data Science
- Cyber Security
- Software Engineering
- Cloud Computing
- 4G/5G Technology
- Digital Marketing
- Human Centered Design
- Digital Skills for corporate
- Entrepreneurship in ICT

IIPGH Academy is the learning and skills development division of the Institute of ICT Professionals, Ghana (IIPGH). The Academy forms partnerships with organizations in order to deliver training programs to both members and non-members of the Institute. Our seasoned ICT professionals have industry experience in Ghana and International ICT markets and are able to provide practical trainings in all domains of Information and Communications Technology. Netguard Group a corporate member is the service delivery partner of the institute for academy trainings.

In line with our objectives, IIPGH is embarking on a major program to get as many children of school going age to learn practical and relevant ICT skills such as coding and other digital skills. The institute wants to help children develop interest and skills in computer programming at an early stage. The coding class and other programs will also give the students problem solving skills and nurture their minds to become creative thinkers that would lead to innovation.

CODING

Coding or Computer Programming is what makes it possible for us to create computer software, apps and websites. Our browser, Operating System, the apps on our phones, Facebook and WhatsApp among others were Developed through Coding.



- Coding for kids
- Computer programming for Teenagers

HIGHLIGHTS OF CODING (COMPUTER PROGRAMMING)

- Coding offers the opportunity to communicate ideas in a logical and structured manner
- Coding gives the chance for creating highly paid jobs
- Coding enables the individual to be resourceful and versatile

BENEFITS OF CODING

Learning coding empowers you to do many things you wouldn't otherwise be able to do. These things include hand-crafting your own websites, becoming a career coder or even starting a technology business. Most importantly, you'll be able to understand the technology shaping your world.

CODING HELPS IN OTHER AREAS;

- Enables critical thinking
- Builds Persistence and perseverance
- Helps acquire problem solving skills
- There is enhanced mathematical skill set.
- Coding gives the chance for creating highly paid jobs

PRACTICAL BENEFITS OF CODING

- Make Your Own Website
- Become a Career Coder
- Start a Business
- Understand How Computers Work

MESSAGE FROM A BOARD MEMBER

Mrs. Lucy Quist

CEO - Quist Blue Diamond

Board Member, Institute of ICT Professionals Ghana

My reason for joining the IIPGH board was clear - we need to organize ICT professionals and position them as a knowledge source for our growing economy. If that mission could benefit from my experience then I was definitely in.

That mandate includes preparing the next generation of professionals in the hope that they will achieve far greater heights than their predecessors.

The ambition to develop the next generation has led the IIPGH to foray into delivering coding classes for young people. Early exposure will set them up for future success and build a ready pipeline we can all be proud of.

When I look back at the progress made so far in empowering young people through coding, I like to see the glass as half full. Over the course of just one generation we have seen dramatic progress in enabling access to coding thanks to the effort of early believers.

One of the earliest proponents of access to computer skills in Ghana was the late Prof. Allotey. He was a brilliant mathematical physicist who could see, from his extension exposure and engagement that we had to proactively engage and create opportunities for more participation. I believe his advocacy is a reason why I received my early exposure.

It was the long vacation of form 3. A fully paid computer camp, dubbed CompuCamp, had been set up on the grounds of Achimota school. Thirty three secondary schools from across the country were asked to nominate a student each to represent their school during a 3-week long intensive residential course in coding. Somehow, my school decided that I would be the representative. It was such a privilege and novelty. The 33 of us had our names published in the national newspapers and announced on GBC radio and TV (now GTV)! Imagine that? For my part I could not believe what was happening.



Today coding is no longer a novelty, it is gradually becoming a necessary empowerment tool for our young people.

Today our world runs on a frontier of Data Science. I recently decided to come up to speed on Data Science; to understand what it is about because as a business leader, I am aware no business, run to scale, can survive without deep analytics. I realized my studies in coding, mathematics, statistics and decision sciences have all come to bear. It all makes sense now.

Coding is one of the key skills for the future of work. We must encourage our children to get conversant with it. To understand how it works no matter what career path they opt to take.

Will your kids be part of the coding generation?

IIPGH CODING FOR KIDS TRAINING ROADMAP



Mouse Maze v461

SCORE 30

x: 240 y: 68

Sprites

New sprite:

Stage 2 backdrops

New backdrop:

Scripts

Costumes

Sounds

Motion

Events

Looks

Control

Sound

Sensing

Pen

Operators

Data

More Blocks

when clicked

forever

if key up arrow pressed? then

point in direction 0

move 5 steps

if touching color ? then

move -10 steps

if key down arrow pressed? then

point in direction 180

move 5 steps

if touching color ? then

move -10 steps

if key left arrow pressed? then

point in direction -90

move 5 steps

if touching color ? then

move -10 steps

if key right arrow pressed? then

point in direction 90

move 5 steps

go to x: 10 y: 130

go to mouse-pointer

glide 1 secs to x: 10 y: 130

change x by 10

set x to 0

change y by 10

set y to 0

Sprites

Mouse1

Ghost1

Maze

Donut

Scratch (6 – 12 years)
Programming Designed for Kids



```

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title> RICHARD JNR
5 </title>
6 </head>
7 <body>
8 <h1 style="color:red;"> MYSELF
9 </h1>
10 <p> My name is ..... I am .. years old.
11 The food i like best is <b>Waakye and egg</b>.
12 My favourite sport is <i>Football</i>.
13 My favourite <ins>colour</ins> is RED
14 </p>
15 </body>
16 </html>

```

HTML (12 years and above)
Programming Designed for older children

IIPGH COMPUTER PROGRAMMING FOR TEENS ROADMAP (13 – 19 YEARS)



MESSAGE FROM A BOARD MEMBER

Kuuku Sam

Director, Professional Services

(Board Member: Institute of ICT Professionals, Ghana)

The fourth industrial revolution presents opportunities in emerging technologies such as robotics, artificial intelligence, blockchain, The Internet of things, quantum computing, big data, cloud computing, machine learning, mobile applications, nanotechnology and 3D printing among others. These technologies are disrupting industries and changing how we work making it impossible for people with “20th century education” to thrive in the world of work.

To become competitive going forward, one needs what has become known as the 21st Century Skills. According to the World Economic Forum, the 21st century skills which are also widely known as “soft skills” can be categorized into foundational literacies, competencies and character qualities.

A key foundational skill is ICT literacy. According to the International Telecommunication Union (ITU), digital skills exists in a continuum and coding or computer programming is part of these skills. They range from basic skills such as using Microsoft Word to intermediate skills such digital graphic design and advance skills in areas such as Data Science and The Internet of Things. You also require soft skills that will help you confront challenges with confidence. At the Institute of ICT Professionals, Ghana (IIPGH), we use coding as a tool to help young people acquire these 21st century skills.

Part of the 21st century skills is focused on building competencies such as critical thinking and problem solving, creativity, communication and collaboration. Therefore, every coding project is focused on using digital skills to solve problems. Usually, the coding projects are introduced early in the programme so that the children will concentrate on the problem they are required to solve.



We live in an era where things are changing rapidly. For those who wish to make an impact, in addition to the competencies mentioned above, certain time-tested qualities must become second nature to them. Characteristics such as curiosity, initiative, persistence, adaptability, leadership and social and cultural awareness are crucial to personal achievement because the world has become complex, dynamic and uncertain. You need an inquisitive mind to unlock the complexities of the wicked problems such as poverty and climate change that confront us. Solutions will not come easily because things keep changing quickly. To succeed we must be persistent and adaptable.

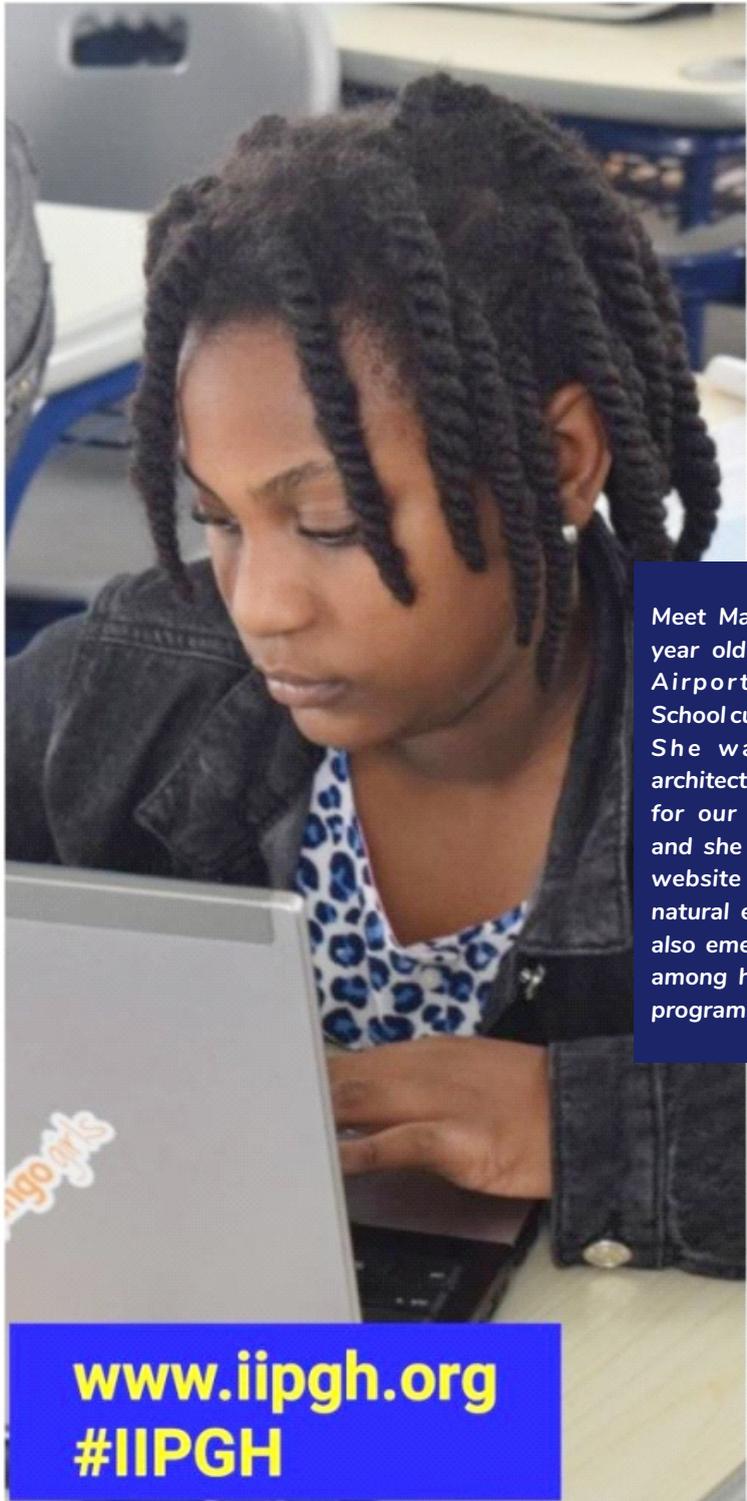
Of all the qualities mentioned, Thelma Quaye, the Head of Business for NetGuard Group Limited and the former Chief Technology Officer of Airtel Ghana, believes the most important is adaptability. I sat in a talk that she gave to students of Tema International School earlier this year as she explained why this generation must learn to adapt. As I analyzed my own life journey I cannot but to agree with her.

At the start of our coding programmes, the children usually want to sit quietly and follow instructions. However, as they become comfortable with coding, they take the initiative and try out new things. Some of them even guide and direct their peers without the assistance of the tutors. We encourage this because we are

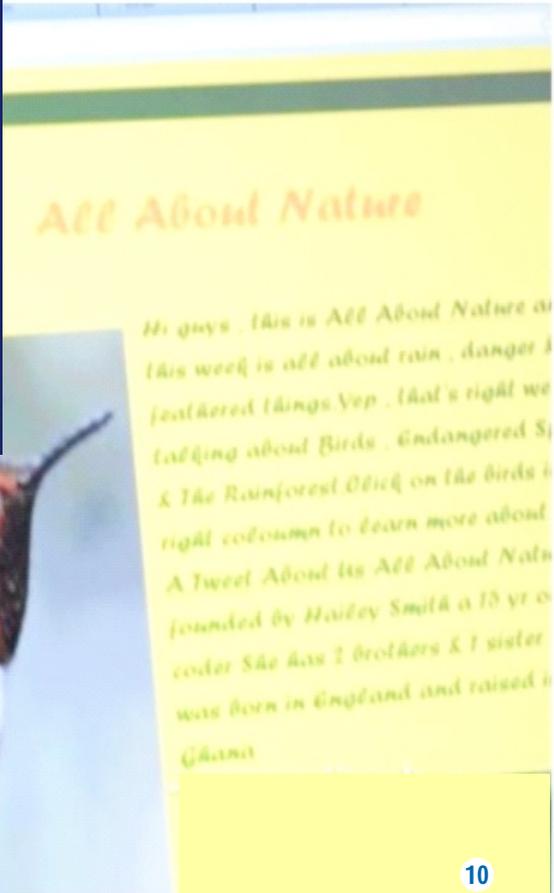
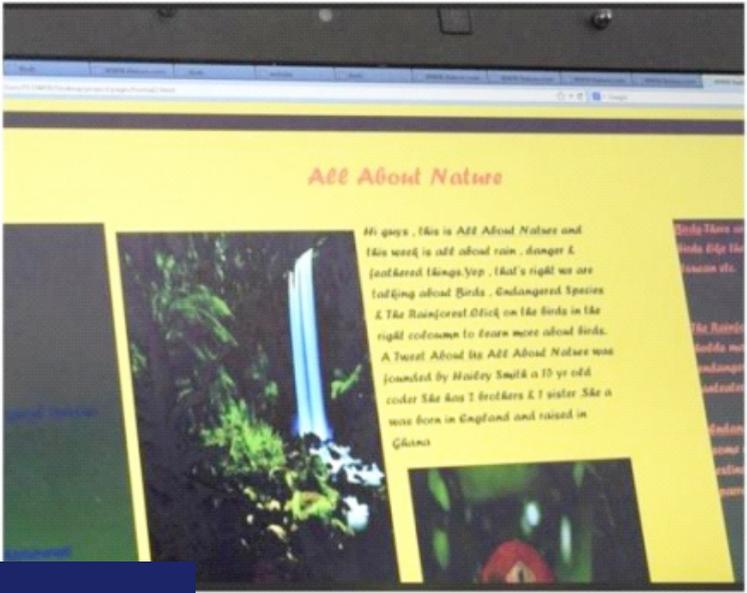
convinced that Ghana needs leaders who can take initiative.

Our web development course starts with an introduction to the internet and the opportunities it offers for personal development. With the internet, one does not need to travel “physically” in order to be culturally and socially aware of today’s global village. Every part of the world is within reach with just a click. All the skills mentioned above accounts for why I insist that coding is good for every child irrespective of his or her future career aspirations.

As Ghanaians we cannot deny that our current educational system does not provide these skills. It is time to pay attention to the 21st Century Skills and coding is an excellent tool to use. Making coding a mainstream subject in our schools is no longer an option.



Meet Makayla Prah a 10 year old student of East Airport International School currently in year 6. She wants to be an architect but have enrolled for our coding program and she has developed a website that shows the natural environment. She also emerged as the best among her peers for this program.



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CODING CENTER 1 IIPGH OFFICE - EAST LEGON

IIPGH started the first coding program at its office at East Legon, Accra
The program which started with only 6 students has now expanded and impacting many children across the country.

CODING CENTER 2 EAST AIRPORT INT. SCHOOL

The Institute of ICT Professionals Ghana (IIPGH) achieved another milestone by introducing its flagship ICT skills development program for children "IIPGH Coding for Kids" program at East Airport International School (EAIS).



SESSION WITH EAST AIRPORT INT. SCHOOL STUDENTS TO INTRODUCE CODING

VACATION CODING CLASSES EAST AIRPORT INT. SCHOOL

4-weeks intensive vacation coding classes at East Airport Int. School achieved very impressive results. Students without any previous knowledge in coding were able to design their own websites and games within the short training period.



EMBRACING CODING

MESSAGE FROM A BOARD MEMBER



Technology has already started developing and embracing more human work activities and this brings a whole new dimension to the future of work and new skills required in this technological era. Considering machines cannot do everything a range of complimentary human skills from technological expertise to social and emotional capabilities in the workplace is becoming eminent. Skills like complex problem solving, critical thinking, creativity, people management, coordinating and collaborating with others, emotional intelligence, judgment and decision making, service orientation, negotiation, learning agility/lifelong learning, flexibility and cognitive thinking among others.

These skills are being cultivated directly and indirectly through the IIPGH Coding for kids programme. The programme I believe sets the stage at a very early age for STEM Entrepreneurship for young Ghanaian girls and boys and the students from this programme I am certain will contribute to improving the way that local companies do business as well as their own revenue-generating business or money-producing ventures in the near future.

Technology and change occurring at a very fast pace is making the future of work less predictable and less structured, yet provides immense and endless opportunities for humanity that can be capitalized. There are still a lot to be explored in technology to provide easier access to information, better innovation, convenience, improved lifestyle, efficiency and productivity, improved entertainment, convenience in education, improved health, social networking among others. I am encouraged that IIPGH's initiatives will enable this and I will urge all members and member volunteers to do our bit to create the future that we want for our beloved country through the power of technology

Mrs. Amma Benneh-Amponsah

Human Resource Executive, MTN Ghana
Board Member, Institute of ICT Professionals Ghana

IIPGH TAKING CODING CAMPAIGN TO ST. MARTIN DE PORRES SCHOOL, DANSOMAN

Leading members of the Institute of ICT Professionals (IIPGH) visited St. Martin de Porres School, Dansoman on 9th May, 2018 to introduce IIPGH's computer programming courses designed for children to the pupils and teachers. The team which was led by the Executive Director of the Institute David Gowu, included Richard Amanfu (Director of Technology), Emmanuel Gadasu (Program Manager, IIPGH Coding for Kids), Charles Frieze (CEO, FrizeMedia) and Kuuku Sam (Director, Professional Services).

<https://www.iipgh.org/iipgh-taking-coding-campaign-to-st-martin-de-porres-school-dansoman>



CODING CENTER 3 – ST. MARTIN DE PORRES DANSOMAN

First coding class at St. Martin de Porres Dansoman.

MESSAGE FROM A BOARD MEMBER

Coding skills: essential for new technology jobs

The world has gone digital, and across all industries the benefits of this transformation are being exploited to the maximum. The need to conduct business across the Internet, the benefits of automating processes, and the necessity to gather intelligence from data, among others, have made digitalization even more compelling. The invisible hand behind this revolution is coding – a popular term used to refer to computer programming.

It is noteworthy that coding is no longer a preserve of the computer scientist. For example, the quest to make all things intelligent by embedding sensors, eventually ushering in an Industrial Internet of Things (IoT) as a key part of Industry 4.0 means that every technology area is now impacted in a way by computing.

New opportunities are opening which will ride on the wings of coding. Lacking such skill will put the 21st century technology-job-seeker at a disadvantage.

Mr. GATSI has over 15 years experience as an ICT Professional. Spending 6 of those years as a Senior RAN Integration Consultant, he has an indepth understanding of the interplay among technology, business and policy. Now in academia, he is focusing on Communications and Physical Computing, among others.

Looking at it more widely, developing coding skills is a must for a society that aspires to become a producer of ICT products and services instead of being a consumer (user of tools developed elsewhere). Countries such as the US, UK and India have become exporters of ICT products and services because they have invested in the development of such skills. In India, for example, coding starts from a very early stage in their educational curriculum. Consequently, they are rather focused on application and advanced knowledge when they get to the university level.



Mr. Francis Gatsi

Lecturer, Ashesi University
Board member, IIPGH.

The clarion call to develop fluency in coding as an essential skill is now too loud to be ignored; it is now a must-have skill for technology and allied jobs irrespective of the specialization. We need to nurture a new generation of coders who know how to use it to solve problems as they grow up. Let's support efforts by IIPGH and other players in the coding eco-system to catalyze this revolution.

IIPGH & UMAT COLLABORATE TO START CODING IN TARKWA



Institute of ICT Professionals Ghana (IIPGH) in collaboration with the Computer Science and Engineering Department of University of Mines & Technology (UMaT) started coding (computer programming) initiative to help young people in the Tarkwa Municipality to acquire essential digital skills at an early age.

As part of the institute's vision "to become the most reliable partner in ICT development in Ghana and beyond", the institute is running Coding and other Digital skills programs at thirteen centers across the country. These are Introduction to Coding for Kids, Introduction to Computer Programming for Teens, Introduction to Computer Programming for JHS and SHS Graduates, and Introduction to Essential Digital Skills for Tertiary Graduates. To ensure successful execution of these programs, the institute has partnered several organizations to enable smooth delivery of our objectives.

The program run for 4 weeks was opened by Head of Department (HoD) for Computer Science and Engineering, Dr. Cynthia Boye on 4th July, 2018.

CODING CENTER 4 – UNIVERSITY OF MINES & TECHNOLOGY (UMAT) TARKWA



SUCCESSFUL FIRST CODING COURSE IN TARKWA

The institute of ICT Professionals Ghana (IIPGH) in collaboration with Computer Science & Engineering Department of University of Mines & Technology (UMaT) organized coding (computer programming) class for JHS/SHS graduates who are currently on vacation in Tarkwa municipality. The first batch of students completed the one (1) month intensive practical training course on Monday 30th July, 2018.
<https://www.iipgh.org/successful-first-coding-course-in-tarkwa/>

CODING CENTER 4 - 2ND BATCH GRADUATES FROM CODING CLASS UNIVERSITY OF MINES & TECHNOLOGY (UMAT) TARKWA

The second batch of coding had children from age 6 participating. The kids we taught Scratch programming and they were able to design games and animations. The older ones learnt how to design simple website using HTML, CSS & Javascript





Mr. Prince Ofose Sefah

Deputy Director General - Operations, NCA
Board Member, Institute of ICT Professionals Ghana

ICT Human Resource Capacity Building, the Importance of Coding

At the 2018 Korea-Africa Economic Cooperation (KOAFEC) Conference, held in May this year, in Busan, South Korea, the theme was “Africa and 4th Industrial Revolution: Opportunities for Leapfrogging?”.

Korea was the perfect setting for the inspiration an African needs, indeed, having leapfrogged into the first world in such a short time, its devastating civil war just a few decades ago.

The keynote speaker at the event was Dr. Ngozi Okonjo-Iweala, famed Economist, the first female Minister of Finance as well as Foreign Affairs of Nigeria, former Managing Director of the World Bank (2007-2011) and Chair of the Board of the Global Alliance for Vaccines and Immunization (GAVI) and the African Risk Capacity (ARC).

She shared many insightful facts, 4 of which really stand out to me. That, AI will lead to net job losses of about 5% globally. However, the countries which will avoid this squeeze are those who will lead in AI adoption and capacity building.

MESSAGE FROM A BOARD MEMBER

Further, she said that Africa faces a two-pronged human capacity building problem – inadequate education of its citizenry and inadequate relevant education for the times.

So, it is heartwarming to see the introduction of Free SHS in Ghana. In fact, virtually all developed countries have this setup. Also, government's refocus on technical education should be supported and accelerated. Finally, the Ministry of Education and Ghana Education Service need to work hard to ensure our curriculum is one which is in tune with modern times and development.

For, underpinning all these truths about the present and future being dominated by ICT from such a credible source, is the capacity of the citizenry, especially the youth, to embrace the kind of education and training which will help Ghana leapfrog and master the 4th industrial revolution and bring about accelerated development. And, underpinning ICT capacity, is computer programming or coding.

Therefore, the efforts of the government and non-governmental institutions like IIPGH to “catch our children young” in this area will go a long way towards the bright future we envision for our nation. Individual, parents, families and governments should all get aboard this express train.

CODING CENTER 5 – EDUCASE LITERACY CONSULT, OGBODJO EAST LEGON



This is one of the centers for IIPGH ICT skills Development program. During the long vacation from July – August, 13 students enrolled for both juniors (Scratch) training and that of Teens (learning HTML, CSS and JavaScript)

CODING CENTER 6 – ALPHA BETA SCHOOL (SKILL UP AFRICA CENTRE)

Successful First Coding Course in Alpha Beta and Skill Up Africa – The institute of ICT Professionals Ghana (IIPGH) in collaboration with Alpha Beta Schools & Skill Up Africa organized coding (computer programming) class for the students of Alpha Beta School and other students from different schools who joined through the Skill Up center. The training took place at the Skill Up Africa building which is on the same compound with Alpha Beta Schools. The first batch of students completed the one (1) month intensive practical training course on Friday 24th August, 2018.

The Executive Director of the institute of ICT Professionals Ghana Mr. David Gowu, the Human Resource Manager of NetGuard Group (A partner of IIPGH) and the programs development officer of IIPGH Mr. Richard Amanfu, joined the Director of Alpha Beta Schools, Dr. Naomi Adjepong to assess the impact of the training. The students were able to code their unique Games, animations and websites with added contents. At the end of the 4 weeks session, the students said they initially thought computer programming was an activity for adults only. But now, they just want more of it.



CODING CENTER 7 PIONEERS INTERNATIONAL ACADEMY (COMMUNITY 25, TEMA)

Pioneers International academy located in Tema Community 25 on the Prampram Road is one of our coding centers. Total of 18 students enrolled for the coding program.

Coding class - Batch 1

9 students formed the first batch that started on Monday 9th July and ended on 7th August (3 times a week sessions). They studied Scratch and HTML. All the students designed their own games and successfully demonstrated how to play the games.

Coding Class - Batch 2.

The 2nd batch also had 9 students and due to the limited time on the training, these students had an intensive 2 weeks training. They started their course on 30th July and ended on 10th August.



CODING CENTER 8 MANET COURT ESTATE (SPINTEX ROAD)

This center is unique as the coding program is being run in a home of one of the co-founders of the institute.

However enrollment has been impressive. Total of 20 students enrolled for the coding program and have been grouped into juniors learning Scratch and seniors learning HTML, CSS and JavaScript.

In addition, due to limited space and schedule of parents, arrangements were made for morning class 10am – 12pm and 2pm – 4pm.

The community based coding activities yielding more positive results in terms of participation. It's convenient for parents to enroll their children as it's convenient.

CODING CENTER 9 PECULIAR INTERNATIONAL SCHOOL (KASOA)

Peculiar International School located at Kasoa is very unique. Not just because it is home to a rich cultural mix of hundreds of learners with mix nationalities with ages ranging from 1 to 18 years, nor because it operates with an inclusive approach. The reason is simple, it is more than a school; it is one big family.

IIPGH in collaboration with NetGuard Group run the coding program during the vacation period (July – August) where 17 students participated in the IIPGH designed programming course.





Veronica Boateng (Mrs.)

CEO & Principal Consultant, Pinnacle Logic Technologies
Board Member, Institute of ICT Professionals Ghana

ICT Education: The Importance of Coding in Schools

Teaching Computer coding in schools is necessary to expose students to technology and reveal skills needed to develop computer applications. This will help reduce the number of foreign national Information Technology experts importation for implementation of IT solutions in Ghana and also create more jobs in the IT computer programming field.

Computer coding in addition to providing technical skills also provides abilities and skills such as critical thinking, persistency, problem-solving, mathematical inclination, processing skills, determination, creativity and innovation. These abilities when developed at an early stage in students in pre-tertiary levels will help develop students in a better way to be more productive in the workforce and in their future career. Introducing coding at an earlier stage of students' academic curriculum will help to demystify Information

Technology as an intimidating area and an area for males only. The expansion of the IT sector has been a critical factor in global economic and social growth. From financial markets to healthcare sector, the efficiency improvements catalyzed by developments in the IT sector has been critical.

MESSAGE FROM A BOARD MEMBER

Hence, it is of no surprise that emerging economies such as China have invested immense amounts of capital in the development of IT infrastructure to compete with that of the developed world. Developing Countries, through the harnessing of IT-related skills, such as coding in schools, can leap frog into higher levels social and economic progression.

Encouraging coding also offers an avenue for promoting gender equality and women empowerment. By targeting young girls in primary and secondary schools with the provision of computer programming studies, governments across the globe can work towards increasing female participation in the Science, Technology, Engineering and Math (STEM) field. This will have the cascading effect of leading to an increase in the number of female entrepreneurs and women-run businesses.

In emerging markets, this will also provide both new and established IT businesses with a diverse pool of technically proficient personnel to recruit from. The success chalked by organizations such as Rails Girls, Girls Who Code, Black Girls Code and Google's Made with Coding indicate the potential that can be harnessed. Hence, it is essential for schools, especially ones with low female participation in STEM subjects, to accommodate the introduction of such initiatives.

The coding for students initiative taken by the Institute of IT Professionals Ghana (IIPGH) is a laudable idea to serve as a pilot test implementation of coding in schools in Ghana.

Creating a conducive environment in our schools for the study of coding should be pivotal for all interested stakeholders – parents, school officials and governments. Hence, efforts have to be made to facilitate higher levels of interest amongst students.

EXHIBITION OF PROJECTS BY STUDENTS - GAMES & WEBSITES

Meet **Nana Akua...**

She **#coded** the best Game with **#scratch** and also developed a **#product** website for her mum.

She is **11yrs**
#CodingRevolution

Meet **Kingsley...**

He **#coded** an awesome animation and a Game using the **#scratch** App.

He is **11yrs**

Meet **Asantewaa Nyanteh**, a 13 year old on holidays in Ghana, from Maryland, USA. She joined the teens coding class on the 16th July 2018. Asantewaa created a school management website during the 4 week program. She wants to be a civil engineer in future, and hopes to make some business out of what she has learnt, by creating website and apps for SME's in the meantime.

Meet **Caleb...**

He **#coded** a very creative animation and a Game using the **#scratch** App.

He is **9yrs**
#CodingRevolution
#IndividualProjects

My name is **Shaun Nee-Owuo**, a 6-yr old student from East Airport International school.

I want to be a footballer in future. I spent my vacation holidays learning Scratch Programming.

I have developed a "Missile-Dodging Game". I have acquired critical thinking ability which can help me dribble people on the field by learning Scratch Programming.

He is **9yrs**
#CodingRevolution
#IndividualProjects

Hello! This is **Elijah O'Sullivan** a 9-yr old student from East Airport International School. He spent this long vacation to learn Scratch Programming.

Elijah developed a "two-ball ever complicating Ping Pong Game".

To Elijah, it is an amazing experience because he wants to be a Software Developer in the near future.

According to Elijah, He is a step closer to his dreams!

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Meet **Makayla Prah** a 10-yr old student of East Airport International School currently in yr 6.

She wants to be an architect but have enrolled for our Web Development and she has developed a website that shows the natural environment. She also emerged as the best among her peers for this program.

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VOLUNTEERS – CODING PROGRAM



GRADUATIONS & AWARDS OF CERTIFICATES



Educase Literacy Consult



Pioneers International Academy – Batch 2



University of Mines & Technology, Tarkwa – Batch 1



Peculiar International School



Manet Court Estate



East Airport International School



Pioneers International Academy – Batch 1



University of Mines & Technology, Tarkwa – Batch 2

HIPGH & NETGUARD GROUP PROMOTING CODING FOR GIRLS





NETGUARD PARTICIPATES IN AFRICAN GIRLS CAN CODE INITIATIVE (AGCCI) IN ADDIS ABABA

The International Telecommunication Union (ITU) and the United Nations (UN) Women, in partnership with the African Union (AU) Commission have started a four-year Information and Communication Technology (ICT) skills development programme dubbed African Girls Can Code Initiative (AGCCI) 2018 -2022. The initiative which uses a spark interest approach will nurture young girls to develop interest in coding and make an early stage career choice in Science, Technology, Engineering and Mathematics (STEM). The programme will train and empower girls and young women with ICT skills. Other objectives of the programme include encouraging girls to acquire digital skills, establishing business links, connecting them to role models and providing a community for the sharing of experiences.

The African Girls Can Code Initiative (AGCCI) identifies two areas that are critical to ensuring girl empowerment; Bridging the technological divide by providing tangible programmes to increase women's access to modern technology

Empowerment through access to education and employment by providing young girls and women with pathways to contribute and participate in material ways to Africa's innovation, industrialization and growth by mastering ICT.

As part of the coding camp, on Wednesday 21st August, 2018, Thelma Quaye who represented Ghana made a presentation on Sustainable Development Goal number 5 (SDG # 5) which concentrates on Gender Equality. Mrs. Quaye, who is the Head of Business of NetGuard Group Limited and former Chief Technology Officer (CTO) of Airtel Ghana, emphasized that gender equality does not mean women fighting men but it is about equal access to rights and opportunity. She asked all present to commit to using ICT to promote the empowerment of the female as this will contribute to ending hunger and poverty. Thelma Quaye also served as a trainer for the girls who focused on gaming during the coding camp.

<https://netguardgroup.com/news/agcci/>

NEWSPAPER COVERAGE OF IIPGH CODING ACTIVITIES

Successful first coding course in Tarkwa comes off

The Institute of ICT Professionals Ghana (IIPGH), in collaboration with Computer Science & Engineering Department of University of Mines & Technology (UMaT), organized coding (computer programming) class for JHS/SHS graduates who are currently on vacation in Tarkwa municipality.

The first batch of students completed the one-month intensive practical training course on Monday 30th July, 2018.

The Executive Director of the Institute of ICT Professionals Ghana, David Gowu, joined the Head of Department (HoD) of the Engineering Department of UMaT and other lecturers to the department to assess the impact of the training.

All 23 students were able to create their unique websites and added relevant content. Some of these students were enrolled for the training unable to properly use the

computer and could not type using the keyboard.

But within four weeks of intensive, structured and practical training they are now very conversant with the computer and developed websites. They now use the internet for research among others which serves as the first step towards acquiring 21st century digital skills.

Major stakeholders involved in the program were pleasantly surprised by the impressive performance demonstrated by the students. Some students were able to demonstrate their entrepreneurial skills by developing websites for targeted areas such as tourism where a student developed a one-stop website for all tourist places in Ghana.

Others developed e-commerce website for made in Ghana products and fashion that promote local fabrics and our local clothing industry.

Certificate of participation was issued to all



the students and they were advised to continue practicing and improving on what they have learnt. Mr. David Gowu administered the graduating students to take this program seriously so they can also compete with other students learning coding across Ghana and the world at large.

On her part, the HoD of Computer Science & Engineering Department Mrs. Cynthia Boye recommended

the students for their perseverance and advised them to think of how to use their newly acquired skills to start an online business while still continuing with their education.

She also added that digital skills training program can be extended to young people in deprived communities within the Tarkwa Municipality if corporate organizations,

NGOs and other stakeholders support this initiative through sponsorships.

Prior to the closing ceremony, some selected students with their instructors were invited to the local Radio Station Dynamic 88.9 FM to share their experiences.

William Agagbaha and Dr Vincent Nofong (Lecturers from UMaT Computer Science and Engineering Department)

NetGuard participates in African Girls Can Code Initiative in Addis Ababa

The NetGuard team participated in the African Girls Can Code Initiative in Addis Ababa, Ethiopia. The initiative aims to empower young girls with digital skills and entrepreneurship. The team was joined by other participants from various African countries. They engaged in workshops, coding sessions, and networking activities. The event was a success, with many girls expressing interest in learning more about technology and coding.



CCIFG organises signature back-to-business networking cocktail

The Chamber of Commerce & Industry of Ghana (CCIFG) organized a signature back-to-business networking cocktail. The event was held at a high-profile venue and attracted many business leaders and professionals. The cocktail provided an excellent opportunity for networking and discussing business opportunities. The CCIFG expressed its commitment to supporting the private sector and fostering economic growth.

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ICT Insight with

Institute of ICT Professionals

Data Science: ...building on coding

More than ever before, data is the lifeblood of modern businesses. The ability to analyze and interpret this data is what separates successful companies from the rest. Data science is the process of using statistical and computational techniques to extract insights from data. It is a multidisciplinary field that combines computer science, statistics, and domain expertise. Coding is the foundation of data science, as it allows us to create algorithms that can process and analyze large volumes of data. As businesses continue to generate more data, the demand for data science professionals will continue to grow. The Institute of ICT Professionals is committed to providing the highest quality training in data science and coding, ensuring our students are equipped with the skills they need to succeed in this rapidly evolving field.

MONDAY SEPTEMBER 14, 2018

ICT Insight with

Institute of ICT Professionals

Coding: A tool for developing 21st century skills in children

The fourth industrial revolution, characterized by the convergence of digital, biological, and nanotechnology, is reshaping the world. In this new era, coding has emerged as a fundamental skill for children, equipping them with the tools they need to thrive in a digital world. Coding teaches children logical thinking, problem-solving, and creativity. It also helps them understand how technology works and empowers them to create their own digital solutions. The Institute of ICT Professionals offers a comprehensive coding program for children, designed to be fun, engaging, and educational. Our experienced instructors use interactive tools and real-world examples to make learning coding an enjoyable experience. By the end of the program, children will have developed a strong foundation in coding and will be confident enough to explore more advanced topics. Join our coding program today and give your child the skills they need to succeed in the 21st century.

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ICT Insight with

Institute of ICT Professionals

Coding Skills: Essential for new technology jobs

The Institute of ICT Professionals, Ghana (IIPGH) is a recognized institution for providing high-quality training in Information and Communication Technology (ICT). One of the key areas of focus is coding, which is becoming an essential skill for many new technology jobs. Coding is the process of writing instructions that a computer can follow to perform a specific task. It is a logical and systematic way of thinking that is applicable in many areas of life. The IIPGH offers a comprehensive coding program that covers the fundamentals of programming and provides hands-on experience with various coding languages and tools. Our experienced instructors are passionate about teaching and ensuring that our students gain a deep understanding of coding. By the end of the program, students will be able to write functional code and will be well-prepared to enter the workforce. The IIPGH is committed to providing the highest quality training and ensuring that our students are equipped with the skills they need to succeed in the ever-evolving ICT industry.

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ICT Insight with

Institute of ICT Professionals

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IIPGH holds first coding class at East Airport International School

The Institute of ICT Professionals Ghana (IIPGH) has successfully conducted its first coding class at the East Airport International School. The program was a great success, with students showing a high level of interest and engagement. The class was held in a modern, well-equipped computer lab, providing an ideal environment for learning. The IIPGH team was supported by the school's staff and students, who provided a warm and welcoming atmosphere. The coding class was designed to be fun and interactive, using a variety of tools and resources to make learning an enjoyable experience. The IIPGH is committed to providing the highest quality training and ensuring that our students are equipped with the skills they need to succeed in the ever-evolving ICT industry.

commerce & e-business 23

Theodore LAWSON

Gov't telemedicine initiative may fail if not done well!.... Pt.2

A telemedicine is the use of information and communication technologies to provide medical services to patients who are geographically separated from their healthcare providers. It has the potential to improve access to healthcare, reduce costs, and increase patient satisfaction. However, for telemedicine to be successful, it must be implemented correctly. The government's telemedicine initiative in Ghana is a promising step towards improving healthcare, but it faces several challenges. One of the main challenges is the lack of infrastructure, particularly in rural areas. Another challenge is the need for training and support for healthcare providers and patients. The government must address these challenges to ensure the success of the telemedicine initiative. The Institute of ICT Professionals is committed to providing the highest quality training in telemedicine and ensuring that our students are equipped with the skills they need to succeed in this field.

news 7

Listening to Africa's future farmers

Agriculture is the backbone of many African economies, and it is essential for the continent's future. However, the agricultural sector in Africa faces many challenges, including climate change, soil degradation, and lack of access to resources. The Institute of ICT Professionals is committed to providing the highest quality training in agriculture and ensuring that our students are equipped with the skills they need to succeed in this field. We offer a comprehensive program that covers the fundamentals of agriculture and provides hands-on experience with various agricultural practices and technologies. Our experienced instructors are passionate about teaching and ensuring that our students gain a deep understanding of agriculture. By the end of the program, students will be able to apply their knowledge and skills to real-world situations and will be well-prepared to enter the workforce. The IIPGH is committed to providing the highest quality training and ensuring that our students are equipped with the skills they need to succeed in the ever-evolving agricultural industry.



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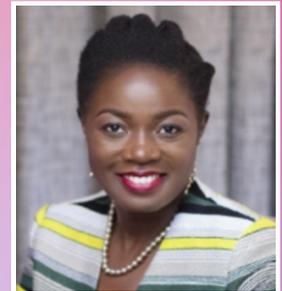
Member: Abraham K. Sam
Director Professional Services, IIPGH

Mr. David Gowu
Executive Director, IIPGH

EXECUTIVE COUNCIL

We unveil the Executive Council (Board of Directors) of the Institute of ICT Professionals Ghana (IIPGH). The council is the highest decision making body of the Institute. IIPGH is looking forward to collaborating with all stakeholders in the ICT industry in Ghana and beyond to create a vibrant ICT ecosystem.

The Executive Council (Board of Directors)



EXPECTED OUTCOME OF THE PROGRAM

At the end of the program the participants/students are expected to gain the following;

- Initiate projects and communicate ideas in a logical & structured manner.
- Design simple games
- Develop Creative, curious and critical thinking mindset
- Enables children to be resourceful and innovative
- Preparations towards high income earning jobs



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