GSMA Tech4Girls

EQUALS GLOBAL PARTNERSHIP

Tech4Girls

Mobile Apps Development

Curriculum Outline and Synopsis

GSMA TECH4GIRLS INITIATIVE POWERED BY EQUALS

Tech4Girls is an initiative running hands-on educational workshops for girls, where participants learn about different technologies, hear from industry leaders and gain a better understanding of careers in tech.

The Tech4Girls initiative was initially launched in March 2018 by GSMA North America with a mission to inspire girls and young women into STEM careers. To date, approximately 300 girls have participated in workshops and activities held in Atlanta, Buenos Aires, Guyana, Trinidad and Tobago, Barcelona, Beijing, Brussels, Dubai, Hong Kong, London, and Nairobi. Participants have developed a wide array of technologies including an artificial intelligence tool such as Google Home, a Kano Computer, a mobile app, and a mobile ring tone, to name a few.

In September 2019, GSMA took the Tech4Girls initiative to the EQUALS Global Partnership for Digital Gender Equality in an effort to scale the initiative globally and expand its scope and outreach by leveraging EQUALS members' expertise in creating a sustainable, long-term training approach with lasting educational impact.

This Tech4Girls workshop series aims to make younger females feel welcome and empowered in the industry and to overcome gender barriers in relation to access and use of digital technologies. This important work will shape the workforce of tomorrow, ensuring that this new group provides the diverse skills and perspectives needed for the industry to thrive.

I. WORKSHOP OBJECTIVES

➢ Participants increase their knowledge of the exciting range of tech-related employment/career opportunities and how tech is embedded in most occupations.

➢ Participants engage with and increase their knowledge of tech and a range of tech skills by completing the "Mobile Apps Development" hands on workshop module.

➢ Participants increase their confidence (self-efficacy) in their ability to pursue further tech studies/training and/or employment and careers in tech.

➢ Participants increase their knowledge of how technology can support & boost their employability/livelihoods.

➢ Participants are more inclined to proactively pursue further tech studies/training and careers in tech/tech-related employment.

➢ Participants learn new set of skills that help them shift from just consuming information to becoming digital creators. Learning to code combines scientific knowledge with creativity and learning a whole new language.

➢ Participants can expand the creativity and problem-solving by learning coding and programming logic.

II. WORKSHOP OUTCOMES

The workshop outcomes will be tied to the overall Tech4Girls key programmatic deliverables as follows:

➢ 70% of girls and young women who have participated in Tech4Girls workshops have increased their knowledge of STEM career opportunities
➢ 60% of girls and young women who have participated in the Tech4Girls workshops have enrolled in a tech training course and/or an EQUALS Badges course
➢ 60% of young girls and women who have participated in the Tech4Girls workshops can now understand how technology can support their livelihood

III. CURRICULUM SYNOPSIS

Mobile technology has become a tool for girls and women empowerment, activism and socio-economic progress. In developing countries especially, the number of mobile Internet connections is increasing exponentially, and smartphones are often the only computer available. GSMA's Mobile Gender Gap Report stresses this point, indicating that women are on average 10% less likely to own a mobile phone and 26% less likely to use mobile internet in low- and middle-income countries – translating to 327 million fewer women digitally empowered. By introducing young women to relevant digital skills, the Tech4Girls Initiative helps to empower them and makes strides towards gender equality.

Within this context, Tech4Girls Mobile Apps workshops enable a critical mass of female to leverage technology and to address personal and local challenges. The Initiative's comprehensive training also involves boosting self-confidence and creativity, breaking stereotypes and gender norms and enjoying the act of learning. The Initiative promotes the creation of inclusive digital societies and strives to foster gender equality by unlocking the potential of girls and women in ICT (SDG5). The initiative introduces girls and young women to entrepreneurship to create viable employment opportunities in the mobile phone industry and ICT Sector.

Smartphone ownership and locally relevant applications can be a key to women's empowerment, shattering their isolation and unleashing their powers. Even further, the ability to develop mobile and web applications has the potential to enrich their skillset, to create job opportunities and to give them a platform in emerging digital economies.

Encouraging women and girls to pursue ICT careers also fosters a more dynamic technology sector, posing extensive benefits for companies. A more gender-balanced workforce reflects the customer base more accurately, enhances productivity and innovation and leads to better financial results.

What is Mobile Apps Development?

Mobile application development is the process of creating software applications that run on a mobile device, and a typical mobile application utilizes a network connection to work with remote computing resources.

There are two dominant platforms in the modern smartphone market. One is the iOS platform from Apple Inc. The iOS platform is the operating system that powers Apple's line of iPhone smartphones. The second is Android from Google. The Android operating system is used not only by Google devices but also by many other (original equipment manufacturer) OEMs to build their own smartphones and other smart devices.

Importance of Mobile Application

➢ Over 1 billion smartphones and 179 billion mobile applications downloaded per year, Mobile development is certainly one of the actively growing sectors.
➢ Mobile phones now a days are not used only for the communication with one another, but you can do many things with the help of the smart phones available in market.
➢ Today almost all businesses are using Mobile Apps for growing their business in all over the world. As a result, the need for mobile app developers has been raised, and will likely remain upwardly mobile for a long time to come. According to Paysa, the average salary for an Android developer is around $89,000.

IV. WORKSHOP CURRICULUM OUTLINE

Workshops are an excellent way to give girls and young women a taste of what they can do with technology. In order to engage girls' interest, it is crucial that they not only hear about technology, but also use it. Girls will see for themselves that they don't need to be a math wizard in order to code, or a science expert to program a robot. In a workshop, girls will discover that technology is all about creativity, collaboration and, most importantly, a lot of fun!

Building mobile apps gives the girls and young women a glimpse of the booming app industry and lets them experience creating something with technology.

The goal of this workshop is to teach girls and young women a new set of digital skills that help them shift from just consuming information to becoming digital creators. In this workshop, the girls and young women will learn the basics of creating Mobile

applications. The project of the mobile application is to create an electronic book that represents the women in STEM role models in various countries. The girls will develop and design their own women role models storybook using Thunkable.

<u>In this workshop:</u>

- The girls will get introduced to the Thunkable components, and how they can use them.
- They will learn how to design their apps user interface by inserting media files (video, audio, image, and animation files)
- They will learn the basics of Object-Oriented, and how they can use the logic to accomplish their application tasks.
- They will learn how to store and retrieve data
- In the end, they will be able to install their first applications on their own smartphone (IOS, Android or any platform)

For this purpose implementing partners will be asked to collect pictures, biographies (Approx. 10 sentences), audio / video clips , and animation for local role models.

Participation Requirements:

Participant Profile: Girls and young women aged 10 - 25

Pre-requisite Knowledge:

- Familiarity with Windows
- Internet Browser
- Email
- Browsing websites

Technology Requirements to attend the Mobile App development Workshop:

- ➢ Laptop or desktop computer with Internet Connection
- ➢ Smartphone and phone cable to connect phone with laptop or desktop computer
- ➢ An E-mail account / Gmail

Training Delivery Method: Instructor-Led (In Class or Online with Live Instructor)

Duration for Hands-On Training Activities: 4 hours

DETAILED WORKSHOP CURRICULUM

1. Introduction – Thunkable

Objective: Learn about Thunkable and get set up with the tool you will use to program your App

- ➢ Creating an account in Thunkable
- ➢ Download the Thunkable Mobile app
- ➢ Learn about event driven programming

2. Thunkable User Interface - Components

Objective: Understand the User Interface (UI). It is a collection of all the components you need to design the look and feel of your app.

- ➢ Defining Visible Components
- ➢ Defining Invisible Components
- ➢ Finding Components
- ➢ Components Tree
- ➢ Create New Project

3. User Interface Components

- ➢ Button
- ➢ Label
- ➢ Text Input

4. Variable and Functions

- ➢ Design Welcome Message
- ➢ Change Background Color
- ➢ Build an Image Gallery

V. TRAINER'S PROFILE

➢ Prerequisite skills:
➢ Basic IT skills – Windows, E-mail, Internet, online shopping
➢ Basic programming skills & understanding of basic programming concepts