**Small computing devices (Raspberry Pi)**

Small computing devices is basically what its name describes; it is a small computer component that can be found in many different places used for DIY projects. This is a miniaturised computer component that consists of its own low-power processor or controller and  general Input/Output to minimise the size of this computer. There are many different types and brands of small computing devices for example Raspberry Pi, Makey Makey, Aurdinos, and more.

Here we will mainly focus on Raspberry Pi and some parts of Arduino because they are widely used for education purposes and projects. Before we continue discussing them there should be noted that Raspberry Pi and Arduinos are completely different types of computing devices but they do some similar things. What makes them different? Arduino has a microcontroller similar to what found in calculators; this means that they are low powered and easily run with just a small battery. On the other hand, Raspberry Pi has a microprocessor which is a miniature version of full size computer processor; this makes the Raspberry Pi take more power than Arduinos using a small power supply such as phone chargers and it could also work as a normal computer with an OS.

In the world of tinkering these small devices exist to make small creative DIY devices; we could attach a Raspberry Pi with a motion sensor that is programmed to alert that somebody is passing by making a sound or sending a notification through a phone. There are also other projects that a raspberry pi can become one of which is to be used for making a VPN server which makes your internet connection anonymous automatically. Raspberry Pi has many different possibilities in terms of its projects; it depends on what sort of areas it is intended to be used on. Raspberry Pi is first intended to be used as a small cheap computer that will be widely available to many people and spreading technology to many people's hands. Currently the version of Raspberry Pi hardware is in its fourth generation the Raspberry Pi 4.

**What is the likely impact?**

Raspberry Pi also gives a huge impact for the educational area. The learning method can be modified by using only this small device. With the correct type of Raspberry PI, it will improve the teaching process from the educators to the students, and of course , the collaboration between teacher and this device is necessary as well. When every scholar in the class has the Raspberry Pi kit, then it provides the platform for exploring and creating lots of projects. For example, on the self-paced study, students can learn programming since there are various programming language options that students can easily choose through their own computer desktop. In 2018, there was a survey of Raspberry Pi Certified Educator which was conducted by Jonathan Dickins, and the result of the survey says that there are 83% of Raspberry Pi Certified Educator ( RCEs) who admit that Raspberry Pi has improved the learning system, and so,  the students successfully gaining more computer skills such as programming skill. And from this survey it also states that Scratch and Python are the most used programming language for teaching students.

**How will this affect you?**

The Raspberry Pi may be popular and have many exposure in the IT world but it does not mean that it will be a part of our daily life. We at least have some interest in the DIY projects of Raspberry Pi and willing to experiment a lot with it. For many geeky IT people, we can use Raspberry Pi as a platform for experimenting with computer potential and innovate things that never been thought of using creativity. Raspberry Pi will help IT students to be more creative and innovative by implementing their knowledge in IT. This will come in useful for the young generation, In schools Raspberry Pi will soon be common to teach students how to program and use computer not just the normal way with low cost.

**Reference:**

[**https://www.raspberrypi.org/research-and-insights/**](https://www.raspberrypi.org/research-and-insights/)