Creativity Can Be Taught! A case for Computer programming in Uganda

Creativity, imagination and the drive to question everything is central to the success of many great thinkers, including Einstein, Steve Jobs and our very own African entrepreneur Gordon Wavamunno.

Computer programming is the most important skill we can teach our kids because it fosters creativity a skill that we are all born with but which we lose along the way. Programming reinforces this skill through the following;

1- Encourages experimenting

Creative thinking begins with a questioning mindset. It can be taught by encouraging kids to experiment, explore their ideas, question their assumptions, make mistakes and learn from them. Thomas Edison was a master of this type of thinking. He tested thousands of materials and processes before creating the first working light bulb. “I have successfully discovered 1,000 ways to NOT make a light bulb,” he famously said. With programming, kids are exposed to this process of experimentation. They start by learning a handful of commands to do simple tasks, and with each successful result, they slowly gain the confidence try new and more ambitious things, things that force them to question each decision and ask “What if I tried X?” Testing their assumptions in a live environment frequently results in errors and bugs, giving kids the opportunity to find a workable solution. With practice, kids gain a proficiency in their technical and hypothesizing skills, allowing them to move onto solving increasingly complex problems, and eventually building programs completely on their own.

2- Strengthens whole Brain Thinking

Each side of the brain is said to control different parts of thinking and information processing. The left hemisphere is typically associated with logical, technical, and analytical thinking, whereas the right hemisphere is associated with imagination, artistic, intuitive thinking. We tend to think of creativity as a right-brain function, but the most creative thinkers and problem solvers can effectively engage both hemispheres. Learning programming is particularly powerful because it requires kids to use their technical skills (to build the program) in combination with their artistic and storytelling skills (to design a program that is visually compelling and fun).

3- Gives confidence to create

Like learning a sport or a musical instrument, the cultivation of creativity requires hard work and practice. For kids, if the work is confusing, monotonous or the end goal unappealing, the desire to practice weakens. Kids must be motivated. They need to be in an environment that builds confidence and instils in them a genuine desire to create. Kids pick up on technology with shocking ease, so giving them a basic knowledge of programming on a coding platform that is fun and easy to use is one of the best ways they can spend time in practice and actually enjoy the process. Learning fluency in the language and logic of programming gives them a springboard to create – to not just play the games that they love, but to create the games they love to play.

All our children deserve a chance to become creators instead of consumers of computer science.” It doesn’t mean they’ll all grow up to be computer programmers. Programming is part of the development of a valuable technical and creative skill set that will grow with them into adulthood, enabling them to thrive in our ever growing digital world. It’s creativity that lays the foundation for innovation, ingenuity and leadership because it represents the ability to connect existing ideas with new solutions, approaches and concepts. And we owe it to our curious and imaginative kids to give them the tools to be the creative thinkers and problem solvers of the next generation.