3D Printing- The Future of Education

The ability to solve real problems in the physical world is one of the key strengths of 3D printing i.e. reimagining manufacturing. 3D printing gives students the unlimited ability to design, test and engineer with hands on exposure to additive manufacturing, and gives them an advantage at the dawn of the next revolution in digital manufacturing. This contributes to their boldness for design, increasing their confidence and imagination.

Nearly every subject has a potential engagement. From STEM (Science, Technology, Engineering and Mathematics) Physics, Design, Art, Law, Ethics, Psychology and Anthropology as well as several other fields in which 3D Printers offer the ability to create solid physical models that could be used to develop “discipline-specific courses” for further education and a future in the next revolution of manufacturing.

Combine students limitless potential with the disruptive technology that is 3D printing, and the result is a powerful combination that can create powerful learning environments in schools. 3D Printing empowers students to embrace innovative technology and allows them to reach new levels of thinking. The exploration of 3D printing, from design to production can open up new possibilities for learning activities.

Students love to explore and try new things, but many are afraid to try; they are scared of failure. 3D printing removes that fear; instead it embodies them with confidence to venture into the unknown. 3D printing in education is unique compared to other technologies. The mindset of the student becomes one where it is okay to fail and encourages experimentation in their learning.

Combined with an ‘Internet of things’, students of today will have powerful tools to solve the problems of tomorrow. With the removal of failure as a fear, students will be able to reach new levels of thinking and problem solving.

3D printers are the perfect vehicle to transform traditional learning methods of, “knowledge through books” to one that encourages creative thought and discussion via hands on technology. The 3D printing technology method utilizes layer by layer of melted plastics to print actual 3D objects which gives it a “cool factor”. Throw in the ability to turn ideas into something tangible and you have technology that can serve an educational purpose.

Applications of 3D Printing: A new dimension in learning

- Capture interest of students**-** The younger students get bored with lots of text and reading, making information visible helps but when you truly want to keep students interested, you print it in 3 dimensions.
- Stimulate interaction during class- By using a 3D printer any class will instantly be transformed in an interactive learning experience. Print parts of a skeleton to use for a biology class or use it for prototyping in technique classes.

- Create tangible aids**-** Difficult concepts will not only be visible but also tangible. Anything you would normally draw out on the blackboard can now be explained through models that students can touch and investigate from any angle. This is something that a 2D drawing can't do because you only have one view.
- 3D printing can be used to connect science and technology because it encourages people to flesh out their ideas and potentially create the next cool widget; it also makes it easier to communicate one's results to people outside one's field of expertise.

Imagine a learning environment where engineers are talking with artists and creating new forms of knowledge. The end result is a new teaching model, where it's about learning from one another to create a spark that can be fanned into a flame. It allows students to break out of the box and cross pollinate their ideas and beliefs in ways they normally could not, thereby unlocking human creativity both individually and collaboratively

Caribbean Industrial Research Institute

The Caribbean Industrial Research Institute (CARIRI) was established with a mandate to enhance industrial capability and competitiveness, both locally and regionally, by providing a range of technical and technological support services, including applied technology, research and development. As such CARIRI's core business is to provide technological solutions and advice, and to source, adapt, and develop technologies for new and existing industries.

Centre for Enterprise Development

With this model in mind CARIRI introduced the Centre for Enterprise Development (CED) which is aimed at facilitating Research, Development and Innovation through capacity building and fostering business creation and expansion through the provision of Incubation infrastructure. Housed at the CED is a 3D lab which educates on Rapid prototyping technology and 3D modeling while offering various services attached to the modeling process. Should you require any additional information please feel free to contact our team to set up an appointment to experience the future of education.

Contact Information

CARIRI Centre for Enterprise Development (CED)
Innovation Avenue, Freeport.
Telephone: 299-0209 Ext: 2670
Email: 3dlab@cariri.com