3D Printing

module 1

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The technology that I would like to talk about is the 3D-printer. I have never worked with a 3D-printer but I have seen it used in person. I have seen ones that are the size of inkjet printers and some that have almost taken up whole rooms. All I know about the 3D-printers is that they are like the inkjet printers. You first create a computerized file, upload it to the printer, then press the “PRINT” button, the printer forces the filaments (metals, glass, paper, and wood) at the end onto a surface, and then after many print cycles or layers produce a 3D object. It may take an hour, a day, or more to make the object depending on the size of the object being printed.

Dr. Hideo Kodama first published his findings of a Rapid Prototyping (RP) system. It was originally called this but since it was a mouthful the term 3D printing was born. They first used this printer as an affordable way to create prototypes for product development. It was the first device to print a physical part from a computer file. However, it wasn’t until 1984 with Charles Hull that the 3D-printer was able to break new ground. Hull invented the stereolithography (SLA or SL), this allows designers to make their own 3D models using digital data files. After uploading these files to the printer, they are able to produce the physical object. Of course, the first patent for it was back in 1986. However, the very first SLA-1 machine (3D-printer) wasn’t made until 1987. Also, the printer didn’t become popular until 2011 when we really started to see what we can make in them. They are already seeing what can be made including food and human body parts. In fact, human body parts have been made and put in bodies successfully.

I would think that a 3D-printer would be beneficial to humanity. Not just from making cheaper merchandise but also from making parts that can help a person live a normal life. I would say that the 3D-printer has helped out everybody a great deal already. Some of the items that the printer has made is better then the other ways. For example, the first organ over made by a printer was not rejected by the body because it was coated by the person own body sells. One of the challenges that I see with this printer is people not wanting to use it because it would take jobs. It is like any other device on the market that the companies are using, so the people working there would not want it.

With all the demand on companies to get products made and out to market the 3D-printer would help immensely. We are trying to make and get products that are natural and environmentally friendly. However, that also means that we need to find more people to work, more items to make and remake other items, and places to do them. With the 3D-printer you can shorten all of these and still make a better product. With the printer you can see if the product is natural and environmentally friendly without all the time, people, and products that you have to throw away. Before the printers’ companies would throw away maybe half the prototypes because they didn’t meet standards. With a 3D-printer you don’t have to do that. You can make the item and then test it, if it does meet standards, you see what you did wrong remake it and test it again. After that you can make more of the item that works by making it the usual way with more people. This way less waste is made and the items are made environmentally friendly.

Few inventions are able to produce items that are cheaper, can be environmentally friendly, make jobs, and make ground breaking items today. The 3D-printer made by Dr. Hideo Kodama and Charles Hull is one of those inventions. The technology can benefit everyone, from the workers to the consumers. The workers can make the items that a 3D-printer can make or use the printer to make an item. The consumers would benefit from it by buying cheaper products and using those products. It would also benefit the interpersonal relationships and the social structures as well. They even have a printer that can make a building. So, we can make almost anything cheaper and better.

**References**

[25 technologies that have changed the world - CNET](https://www.cnet.com/tech/tech-industry/25-technologies-that-have-changed-the-world/)

[History of 3D Printing Timeline: Who Invented 3D Printing - 3D Insider](https://3dinsider.com/3d-printing-history/#:~:text=If%20we%20take%203D%20printing%20from%20its%20origin,The%20Adult%20Stage%3A%202011%20to%20the%20present%20day)