

Braille Translator

Garcia Esquivel, Max (School: Universidad Autonoma de la Laguna)

Hernandez Adame, Jaime (School: Universidad Autonoma de la Laguna)

According with the World Health Organization (2014), there are 285 millions of people with a visual disability all around the world. At least 39 million are totally blind. The main problem that solves this project is that teachers working in a class spend more time with blind students, causing the class not to be the best and the explanations to be slow and inefficient. Current devices to translate text into braille surpass the 3000 dollars allowing its use only to people with high purchasing power and increasing inequality as there is no help for every blind person. This project was created with the aim of helping blind people to read Braille, that consists in a system of raised dots in a 3x2 position that represents letters, and allows to form sentences or large texts. The device was manufactured with a base of recycled materials, which decreases significantly the cost of production, which does not exceed \$ 15 dollars. For offer this price there were a lot of probes, looking mechanisms that make a piston function because a piston need a expensive compressor to work, then we decide use a mechanism using common actuators, and modifying it for have a up-down mechanism with a low cost, making the proyect easier to build it and to program, connecting, etc.. The proyect have at the moment 4 proves with people born with this dificulty and others that no, and we prove it in a class and we look that he learns better with our machine, making the class more effective, and now learning 3 topics that was imposible without our machine. Who prove the machine, say to us, that this proyect Works succesfully, and that it can really help they, and now we are looking to provide more help with our proyect to more people.