

Human-Machine Interaction

Good and Bad Design Lab Assignment 1

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By: Rodrigo Roque Fontinha



Bad Design



Vending machine like the one in Ed.II

Problems:

- The products in the higher row can break into small pieces;
- When a product gets stuck, it changes its status to invalid and people can't choose it anymore, only the manager or owner can fix it by rebooting the machine;
- It is not easy for older people to use because the push door is not that light and you might need to crouch to get it depending on your height or the machine's height.

Solutions:

- Implement some type of elevator that goes up to the row under the product chosen to minimize the fall and then goes down to deliver it; (the elevator needs a sensor to check if there is a product in it or not)
- Implement some type of shakiness in the product zone if it gets stuck or continue pushing very slowly for a few extra seconds and see if it drops in the elevator. (This also avoids the machine getting bumped by people while they try to unstick the product);
- Choose the lighter material possible for the door, and if the door itself is too low, try to give the machine some height by putting an object under.

Good Design



Vending machines in Japan

Japan has the best of the best quality of the vending machines.

- They have vending machines with elevators to avoid damaging it with the fall;
- If the vending machine doesn't have an elevator, the products that are displayed are not the ones that will be consumed. The products are hidden inside the machine with mechanisms to deliver it safely;
- The push door is made with lighter material to make it easier to open.

Example of vending machine with elevator.