EasyWrite

Learn to Write the correct way.

Introduction

It is very important that a person learns how to write and also the correct way. Seeing a character like “I” one person might think it is written by drawing a line from top to bottom, while some may feel it is from bottom to top. Hence understanding the right pattern of writing is important. This is done by our kindgergarten teachers who hold the hands of toddlers and teaching them how to write.

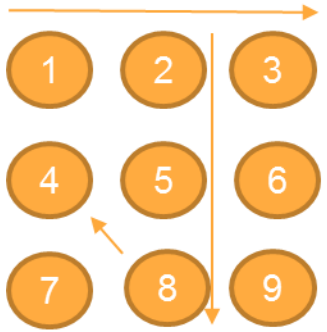
EasyWrite is a ingeniously designed simple and effective unit that can help toddlers write with ease and also assist an adult in helping them write symbols and letters in a new language with ease. Languages related to India are extremely complicated in the symbols and learning the right way is extremely important.

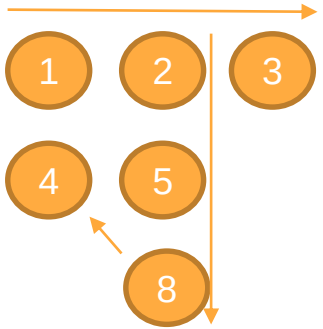
Application

- The primary objective is to provide a mechanism to learn writing unassisted.
- The design is to form an array of small vibrator motors to form a 3” x 3” square interface which can be strapped onto wrist easily.
- The vibrator motors are controlled by receving data from a mobile application which after receiving data, activates the vibrator motors in specific pattern.
- A person moving their hand in sync with the direction of vibration can effectively trace out a character in the right away.
- Consider a simple setup consisting of 9 motors arranged as a 3 x3 matrix which is shown in the next slide.

Application

- The 9 motors are numbers 1-9.
- If the intention is to help trace out “J” it may do so by vibrating the motors indicated by the numbers in the pattern as “123584” giving the shape “J”.
- More number of vibrators can increase the resolution of the traces and draw more complicated shapes and symbols.
- Mobile application to control the learning having various modes like “repeat” each letter 5 times, Total number of letters to be learnt etc.





Target Market and User Base

1) For toddlers and infants. The teacher now can send a signal to the individual student's strap on devices so that every student can start learning to write the correct way. The toddlers need not be assisted with individually. Leading to faster and easier learning.

2) Can be easily used by parents to teach children at home.

3) Visually challenged people can learn to write new languages just by moving the hand in the pattern of vibrations, hence a challenged can communicate to the whole world directly using written words.

4) Encourage learning to increase literacy rates in developing countries and for people who cannot afford education or when the situation is such that there are no schools to teach children and young people. The device can be strapped on any time and the person can learn to write any symbol or letter without any assitance.

5) Adults can use the same to learn a new language and the complicated symbols that forms the alphabet of that language.

Team Members

- Sarath Vadakkepat [current SEAS student]
- Sujith Vadakkepat [India]

Cost:

- Vibrator Motors [9 pieces @ $1 per piece]
- Some miscellaneous electrical/electronic peripherals like wires, breadboard etc. [$20].
- Raspberry Pi is already owned by me and hence will use the same.

TimeLine :

Month 1 - Development of complete application including software and rigging up hardware.

Month 2 - Testing with initial release. Use of Raspberry Pi and full time power source like power bank.

Month 3 - Review of comments and feedback and implementation the same.

Month 4 - Modify the form factor to have a house a AAA battery and simple Bluetooth module to communicate with phone.

Month 5 - Widespread testing with larger user base with varying background and study of feedback and results.