

## User & Domain Research

I decided to work with the visually impaired population and help them learn typing skills. The topic falls under the domain of Education. According to AFB (2020), there are 32.2 million visually impaired people in the US. Therefore, it's an important field to work on to help them become more independent. Typing is an important skill especially for visually impaired people because it opens up great opportunities of employment for them. While there are some already existing technologies that help visually impaired people learn to type with audio instructions and feedback (for example typio), it is important for them to get instructions about their body and hand movements, and about themselves continuously during the learning to ensure effective learning.

Some of the key pain points for the visually impaired people are :

- Not having the basic idea of keyboards and computers like abled people.
- Failing to understand the instructions from others could be frustrating.
- Struggle to maintain right body posture.
- Maintaining good body posture during learning.
- They do not have a continuous monitoring system to provide feedback if they are using the right fingers for different characters in keyboards, or what mistake they made.

(the Perkins school  
for the blind)  
(Willings, 2019)

Some information via the audio interfaces that could help them to learn typing efficiently is:

- At the initial stage of learning, providing enough information about the structure of keyboards and computers and helping them explore.
- Get the information if they are maintaining the right body posture during learning.
- Instructions on how they should position their hand and what fingers they should use to type a particular letter, and feedback on how they are performing to follow the instructions.
- Data about their stress level to realize when they should take a break.

## Reference

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[https://www.pathstoliteracy.org/resource/typio-accessible-typing-tutor/#:~:text=Typio%20was%20designed%20specifically%20for,created%20lessons%2C%20etc.\).](https://www.pathstoliteracy.org/resource/typio-accessible-typing-tutor/#:~:text=Typio%20was%20designed%20specifically%20for,created%20lessons%2C%20etc.).)

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