Topic – Inclusive Learning for All

Problem Statement:

The Indian constitution provides its citizens the Right to Education which guarantees free and compulsory education for children from 6 to 14 years of age in government schools and it also mandates inclusive education for children with disabilities, including those who are visually impaired however due to lack of proper enforcement and inadequate training for the teachers they are not able to support the visually impaired students properly. This indirectly affects the economy since they are not able to provide a valuable contribution due to lack of education. This population need not be a liability. It can be turned into a productive asset by investment in human capital to increase their productivity and develop their skills.

Non-existence of educational platforms/informational systems; not driven by the existing technology stack to enable the deprived class to be more productive and empowering the teachers to make them more inclusive.

Solution:

NetraSetu an app consisting of a smart AI voice assistant, braille converting software and compatibility for multiple languages will help in breaking this educational gap for the visually impaired students. The app will have a minimalistic design to ensure easy understanding of the features. The user is expected to provide the app necessary sources to extract the information from. For example, if the teacher is teaching Chapter-1 Matter In our Surroundings (Grade 9) he/she can download the PDF from the NCERT portal and upload it in the app.

Features:-

- Smart AI voice Assistant Compatible with Multiple Languages. The student can navigate through the App using this assistant reducing dependence on teacher.
- Text To Braille feature where text of any Indian Language will be converted to Braille using Bharati Braille System. English to braille conversion will also be there.
- Braille Mind maps will be generated using AI which can appear like this,

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- It will also have the feature of converting the sources into summarized or detailed audio books.
- The AI voice assistant can solve the child's queries reducing constant dependence on the teacher.
- The app will also include a STT (speech to text) framework compatible with English and Indian languages enabling the visually impaired student to make their own notes in normal text and braille.

*The braille documents can be printed using a braille embosser

Conclusion:

The current teaching process is person dependant , so the actual knowledge transfer cannot be quantified and there is no inclusivity being adhered

The product would be demo'd to the schools to get the actual buy in. Based on the scalability of the product deployment the investors as corporates would be engaged with the help of NGO/government grant accordingly. Training camps would be organized to set the expectations for the teachers so that the real benefit would pass on to the students.