

ABSTRACT

In everyday human life, dependence on physical condition is key to carrying out daily activities. This does not rule out the possibility of people finding themselves in unfortunate circumstances that often cause obstacles. These obstacles are generally divided into five categories based on the type of sensory impairment. To help overcome the limitations of the visually impaired, SLB-A Yayasan Pendidikan Anak-anak Buta (YPAB) Gebang Putih Surabaya has been dedicated to providing inclusive education facilities, from junior high school to high school, for children with special needs since 1959.

The development of the front-end of the TunaNetra AI Mobile Application was carried out in order to contribute to supporting the learning facilities of SLB-A YPAB Gebang Putih Surabaya students by improving the quality of life of the visually impaired. The application is designed to provide real-time information, so that it can guide users to understand objects, directions, and situations around them. However, in developing the front-end of the application, there were challenges in finding the right UIUX reference for users. In order to produce the desired results, collaborative development of the application was necessary. The author used the Design Thinking method, which not only focused on finding the right interface design, but also adapted to the needs of users using a user-centered approach and feedback.

The objective of this study is to support learning facilities by improving the quality of life of people with disabilities at SLB-A YPAB Gebang Putih Surabaya, as well as providing inclusive educational facilities for children with special needs in Indonesia. To this end, the Front-End Development of Mobile-Based AITunaNetra Applications with the Design Thinking Method in the Case Study of SLB-A Gebang Putih Surabaya will be conducted.

Keywords: Mobile Application, Design Thinking, Front-End, Visually Impaired, UIUX