HIS - Haptic Interactive Education System

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Visually impaired students encounter many problems in their educational processes. The inadequacy of Braille embossed and audio information resources, the scarcity of these resources in areas such as science, mathematics, and geometry, and the inability of students to develop themselves in these areas negatively affect both their individual lives and the social order.Tools developed to solve these problems, such as “math cubes” and paper embossed tablets, are inadequate and cumbersome, failing to provide a sustainable method for solving students' problems. The dynamic braille embossed tablets developed at this point are designed to provide braille content and support students in simple mathematical operations; however, they fall short in coordinate planes, function graphs, physics, other STEM courses, and longer problems. Furthermore, these devices are only designed to present prepared text content or limited content, falling short of solving the source problem and leaving many problems encountered by students in their daily lives unanswered. In addition, with prices reaching $25,000, these devices are far from being an accessible and inclusive solution. One of the main reasons for these prices is the high cost of the moving embossing systems used.This project has been developed as an educational system that comprehensively addresses the problems students face. The system is designed on an accessible and low-cost electromagnetic embossing tablet. Tablet use is supported by software features developed according to students' educational scenarios, with the aim of providing an inclusive and accessible educational solution.

Awards Won: