

Stakeholder	Need	Requirement	Metric	Target Range	Rationale
Who...	Benefits from...	The design should...	Evaluated by...	Within...	Because...
New Teachers of Visually Impaired	Seeing as the visually impaired student sees	The goggles should be able to simulate any visual impairment.	Percentage of people whose vision impairment can be accurately simulated	90-100	Students may have a variety of visual impairments each with unique characteristics that must be accommodated for in different ways.
New Teachers of Visually Impaired	Seeing as the visually impaired student sees	The image produced by the goggles must move as the user's pupils move.	The range and precision of eye movement to which the goggles respond	160° detected with 5° precision	Some vision impairments do not cover entire field of vision and must move as eyes move.
New Teachers of Visually Impaired	Spending time on learning and planning effective lessons	The product should be able to be installed quickly in any classroom	Average time a teacher takes to install the product	5-15 minutes	Teachers are very busy. Time demands for activities that do not directly help their teaching should be minimized.
New Teachers of Visually Impaired	Spending time on learning and planning effective lessons	The program settings should be able to be configured quickly	Average time a teacher takes to adjust settings	1-5 minutes	Teachers are very busy. Time demands for activities that do not directly help their teaching should be minimized.
New Teachers of Visually Impaired	Immediate feedback on teaching mistakes	The program should analyze speech and movements of the teacher in real time and provide feedback accordingly.	Time program takes to provide feedback following a major mistake	5-30 seconds	Teachers learn from feedback – significant mistakes should be corrected quickly so that they are not repeated.
New Teachers of Visually Impaired	Written feedback after a lesson	The program should automatically print feedback on the teacher's computer at the end of the lesson.	Types of mistakes the program is capable of detecting	25 or more different types	Teachers learn from feedback – written feedback can easily be reread later to support continual improvement.
New Teachers of Visually Impaired	Seeing their mistakes on their own	The projector should be able to replay any lesson with the teacher as a hologram.	Resolution of the hologram	300-500 ppi	Seeing your own mistakes is a more powerful teaching tool than just being told about them. High resolution is necessary so that the experience feels real.
New Teachers of Visually Impaired	Classroom simulation that mimics what their real classroom will feel like	The program should make each student respond to the teacher's actions according to their personality.	Number of unique student personalities	5 or more	If the practice lesson does not feel like a real lesson, the teacher will not be as effective at transferring the lessons learned during practice.
New Teachers of Visually Impaired	Students being on-task during class time	The product should not draw attention to itself during class while recording a real lesson.	Minutes of class time wasted	0-2	Teachers already struggle to cover sufficient material. We should not introduce anything that makes that more difficult.
School district with a visually impaired student	Long-term use of the product as the child progresses through the school system	The product should last for a long time without need for maintenance.	Years the product remains usable	13 or more	A single blind child will typically be in a school system for 13 years, and every teacher the student has during that time would benefit from using the product.
Volunteers who work with and parents of visually impaired students	Seeing as the visually impaired student sees	The goggles work as a standalone without the rest of the product.	Usability of goggles as an individual unit.	They work	Anyone working with a visually impaired student will be better connected with them after seeing through their eyes.