Addressing Barriers to Classroom Communication by Automating Student to Educator Feedback Loops Through a Novel Software-Based Approach

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The effectiveness of classroom instruction is often compromised by a misunderstanding of student perception of instruction between students and educators. The purpose of this research was to develop a software-based approach that addressed inefficiencies in classroom instruction induced by breakdowns in student-to-teacher feedback loops at the lesson level. The software “Muddiest Point” was developed to automate this process in a way that was accessible and easily integrated into classrooms. This development process included end-user feedback in its design and operations. The software-based approach was then deployed in field tests to measure its effectiveness. These field tests were conducted in an upper elementary education STEM context. It was proven that the application of this software produced a statistically significant increase in student comprehension and confidence in the lesson material. The software had a high degree of adoption across students and provided educators with previously uncollected feedback that was invaluable to live lesson adjustments and optimization of lesson plans.

Awards Won: