Analyzing trends in pen computing among K–2 students through Flashcards application.

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Summary: The Flashcards application is designed for pen-based computers to create the feel of traditional paper-based flashcards while affording the many benefits of new media. It includes a game-like mode, which allows students to play flashcards, just as one would while using conventional methods. Furthermore, the interface also incorporates pen recognition features that allow for instant gratification of students’ work. In addition, teachers are responsible for creating decks consisting of individual cards. Each deck may contain cards that are specifically designed for individual students or for entire content areas. In order to encompass the diversity of decks, cards are marked based on the content area. For K–12 education, standards-based learning has become the indicator of each card’s specific content area. Our application is poised to have deep standards integration by making it easier for the teacher to identify problem areas for students based on the current standards set by states and the country. Additionally, teachers can import existing word documents and PowerPoint slides as decks. Pictures can be added to cards for visually inclined students as well. The Flashcard application is being developed using an incremental release approach so that user feedback can be obtained and the product can be adjusted to meet their needs. In this paper, we offer the results from the second iteration of the application, which was designed specifically for grades K–2. The results were gathered from a series of beta tests, which took place in two kindergarten classrooms, one first grade classroom and one second-grade classroom in December of 2013. Based on the data collected, we surmised conclusions that will help foster the development of our application. In addition, we offer possible directions toward which the application could be headed in the future.

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