

## Perceptions of College Students on Whether an Intelligent Tutoring System Is a Tutor

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**Abstract :** Intelligent tutoring systems (ITS) are computer-based platforms which can incorporate artificial intelligence to provide step-by-step guidance as students practice problem-solving skills. ITS can replicate the benefits of one-on-one tutoring, foster transactivity in collaborative environments, and lead to substantial learning gains when used to supplement the instruction of a teacher or when used as the sole method of instruction. Developments improving the ease of ITS creation have recently increased their proliferation, leading many K-12 schools and institutions of higher education in the United States to regularly use ITS within classrooms. We investigated how students perceive their experience using an ITS. In this study, 111 undergraduate students used an ITS in a college-level introductory statistics course and were subsequently asked for feedback on their experience. Results show that their perceptions were generally favorable of the ITS, and most would seek to use an ITS both for STEM and non-STEM courses in the future. Along with detailed transaction-level data, this feedback also provides insights on the design of user-friendly interfaces, guidance on accessibility for students with impairments, the sequencing of exercises, students' expectation of achievement, and comparisons to other tutoring experiences. We discuss how these findings are important for the creation, implementation, and evaluation of ITS as a mode and method of teaching and learning.

**Keywords :** college statistics course, intelligent tutoring systems, in vivo study, student perceptions of tutoring

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