PRACTUTOR SCIENTIFIC RESEARCH BASE OVERVIEW

PracTutor

Personalized, fun way to master Math and Language Arts

21st Century Learning:

This era, and the next belongs to rigorous thinkers. Children need to get away from lower memorization level and move more towards an analytic level of thinking. Rigorous thinking requires students to do more than just remember what they read; they have to be able to interpret, analyze and evaluate this information in sophisticated ways.

Rigorous thinkers, need to have both Math and Language Arts skills. Math provides children the tools to make sense of the deluge of data that is changing what we can know and predict about almost every aspect of our lives. With Language Arts, they are able to experience the wonder of mathematics in the same way they appreciate the wonders of a great story.

In order to meet this goal, educators need effective tools that can advance student learning with quality learning material and quantify student achievement simultaneously.

What is PracTutor:

The PracTutor design assists teachers and schools to develop Math and ELA skills of their students by improving quality of student instruction. Its design incorporates various pedagogic principles. The PracTutor design and its interactive learning environment are built on the following elements:

- Content that is aligned with Common Core State Standards
- Rich environment for active learning
- "Academic" motivation
- Effective parent participation
- Cognitive load theory
- Integration of the four functions of assessment
- Closing the feedback loop
- Spaced and distributed practice
- Response to Intervention (RTI)

How PracTutor Works:

PracTutor incorporates several educational principles to support its objective. It can monitor, report, and advance student achievement, and assist schools with meeting their accountability goals.

Through its proprietary algorithms, PracTutor facilitates student growth and supports academic achievement.

- Assessments aligned with Common Core State Standards allow teachers to develop a deeper understanding of student progress.
- Interactive technologies allow teachers to improve student performance and reduce the time needed to achieve the targeted instructional objective.
- Personalized rewards foster student's interest via a sense to do well, and help overcome the negative anxiety typically associated with performance evaluations.
- Productive parental participation with a parent-account, and features like messaging, curriculum, test reports and email notifications.
- The platform supports the development of schemas with the aid of hints and a step-by-step feedback structure.
- Intrinsic and germane cognitive load is developed through quizzes and mathematical manipulative questions.
- It integrates the four functions of assessment to develop its personalized learning environment.
- Timely Response to Intervention (RTI) based instruction model allows the student to improve performance even before a teacher-induced intervention is triggered.
- The feedback loop is flexible enough to match the students' learning capabilities, yet is stringent enough to meet the goal of standards mastery.
- The packet structure of the instruction model provides more flexibility to the instructor as compared to a rigid, sequential structure of instruction.
- The reports allow teachers to keep an eagle's eye on student growth and make informed decisions.

Why PracTutor:

We have documented the academic and scientific principles that form the foundation of PracTutor in the document 'PracTutor Scientific Research Base'. The research document builds a foundation to helps the users understand the educational principles that PracTutor is based on, and to understand the way it helps educators to achieve the goals outlined by NCLB, subsequently satisfying students' learning needs as defined by the Common Core State Standards.