

Tutor.com Logic Model

Study Type: ESSA Evidence Level IV

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Tutor.com

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EXECUTIVE SUMMARY

Tutor.com engaged LearnPlatform, a third-party edtech research company, to develop a logic model. LearnPlatform designed the logic model to satisfy Level IV requirements (*Demonstrates a Rationale*) according to the Every Student Succeeds Act (ESSA).¹

Logic Model

A logic model provides a product roadmap, detailing program inputs, participants reached, activities, outputs, and outcomes. LearnPlatform collaborated with Tutor.com to develop and revise the logic model.

Study Design for Tutor.com Evaluation

Informed by the logic model, the next phase will focus on planning for an ESSA Level III study to examine the extent to which Tutor.com is associated with students' confidence, agency, and accelerated learning and achievement through access to targeted, digital, just-in-time tutoring support.

Conclusions

This study provides results to satisfy ESSA evidence requirements for Level IV (*Demonstrates a Rationale*). Study design and planning is currently underway and scheduled for early 2023.

¹ Level IV indicates that an intervention should include a “well-specified logic model that is informed by research or an evaluation that suggests how the intervention is likely to improve relevant outcomes; and an effort to study the effects of the intervention, that will happen as part of the intervention or is underway elsewhere...” (p. 9, U.S. Department of Education, 2016).

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Introduction

Tutor.com engaged LearnPlatform, a third-party edtech research company, to develop a logic model. LearnPlatform designed the logic model to satisfy Level IV requirements (*Demonstrates a Rationale*) according to the Every Student Succeeds Act (ESSA).

Students often need specific, targeted assistance to understand content; for example, to clarify a complex concept, to catch up after missing school, or to complete homework and in-class assignments. Tutor.com promotes educational equity, opportunity, and achievement for all learners by providing live tutoring and assignment review through a network of qualified tutors in a virtual environment. The support provided by Tutor.com is learner-focused, creating opportunities for individualized just-in-time support that allows students to request on-demand, scheduled, and asynchronous sessions and progress beyond roadblocks or gaps in understanding.

The study had the following objectives:

1. Define the Tutor.com logic model and foundational research base.
2. Draft an ESSA Level III study design.

Previous Research. An extensive body of research has identified tutoring as an impactful strategy for improving student outcomes. A comprehensive review of empirical studies on tutoring by the National Bureau of Economic Research found that "across all estimates and studies included in our analysis, tutoring interventions show a statistically significant and substantively large effect size on learning outcomes" (Nickow, Oreopoulos, & Quan, 2020, p. 25). Similarly, in a systematic review of 36 out-of-school-time intervention studies, structured tutoring was identified as one of the top five practice elements most frequently associated with effectiveness (Engell, Kirkøen, Hammerstrøm, Kornør, Ludvigsen, & Hagen, 2020).

In their meta-analysis of academic interventions for students of low socioeconomic status, Dietrichson, Bøg, Filges, and Jørgensen (2017) found that tutoring had the greatest effect size of 14 components of academic interventions (i.e., computer-assisted and small-group instruction) reviewed. Furthermore, research has shown that, compared to non-tutored students, tutored students were more likely to pass their courses and experienced higher rates of assignment and course completion (Al Chibani, 2018; Ritter, Yudelso, Fancsali & Berman, 2016).

However, the cost and practical logistics of providing students individualized tutoring support at scale prevent schools and families from fully realizing potential benefits. Leveraging technology in the context of 1-to-1 tutoring obviates logistical challenges and motivates students to connect for help (Al Chibani, 2018). Tutoring platforms that combine human resources and self-guided electronic services are positioned to provide instructional support equivalent to (or better than) in-person individual tutors, with the ultimate goal of improving student learning outcomes in a practical and cost-effective manner.

Tutor.com aims to advance equity in schools by providing students support from highly qualified tutors trained to use evidence-based strategies (see Table 1). Prior research on the effectiveness of Tutor.com usage has found that students who completed tutoring sessions demonstrated increased success in courses regardless of their gender or age (Bodfish, 2015).

Table 1. Tutor.com tenets of tutoring (Boller, 2020)

Tutoring component	Session practices
<p>Provide accurate content All Tutors are vetted experts in the subjects they tutor to ensure that students receive accurate information and engage in meaningful, content-driven discussions.</p>	<p>Tutor asks for related, already-established information about the problem or assignment provided. Tutor provides support appropriate to the learner level and topic and accesses only information related to addressing the current request.</p>
<p>Appropriately clarify There are many different strategies Tutors can utilize to move students toward understanding including: telling, prompting, modeling, fading, and scaffolding.</p>	<p>The tutor and learner develop a shared understanding of the needs, expectations, and outcomes for the session. The tutor asks questions to reveal information throughout the session instead of making assumptions about what the learner should know.</p>
<p>Identify the appropriate approach The approach should be based on the needs and expectations of the student and their current level of understanding.</p>	<p>Tutor engages the learner in multiple modalities, such as the board, shared image, or graph paper. Tutors can also share files and audio if applicable. Tutors are alert for student cues that indicate the need for a different approach.</p>
<p>Ensure understanding Tutors directly engage students in the learning process, empowering them to continue working independently.</p>	<p>Tutor uses inquiry to guide learning and provides information by chunking answer-giving. The tutor regularly asks check-in questions to ensure the learner remains actively engaged.</p>
<p>Manage time effectively The goal of every session is to lead the student to confidence and independence.</p>	<p>Tutor engages the learner by creating an interactive environment of give-and-take, prompts and responses, and a natural flow of conversation.</p>
<p>Display professionalism and respect Tutors use supportive, positive responses that pertain to the development and realization of understanding or the learning process.</p>	<p>Platform policies and procedures are designed to keep students safe and promote the best learning environment.</p>
<p>Familiarity with policies, procedures, and classroom tools Tutoring sessions should be explicit, efficient, and memorable. Integrating the classroom tools can support interpretation and understanding of conceptual and procedural knowledge for learners.</p>	<p>The classroom tools were designed to be used by Tutors to enhance the learning experience. Tutors should demonstrate familiarity with platform procedures and tools throughout the session. This includes providing explanations and resolving situations where a learner struggles to use a tool.</p>

Interest in online tutoring has continued to grow, especially after the onset of the COVID-19 pandemic, which led to world wide school closures and necessary reliance on alternative approaches to face-to-face education (Yusuf, 2021). Burch, Good, and Heinrich (2016) used a mixed-method, longitudinal approach with findings consistently supporting a strong association between overall hours of digital tutoring received and the effectiveness of tutoring in increasing student achievement. In light of the existing research on digital tutoring, Tutor.com ensures that students have access to high-quality support 24/7, whether in or out of the classroom.

Logic Model

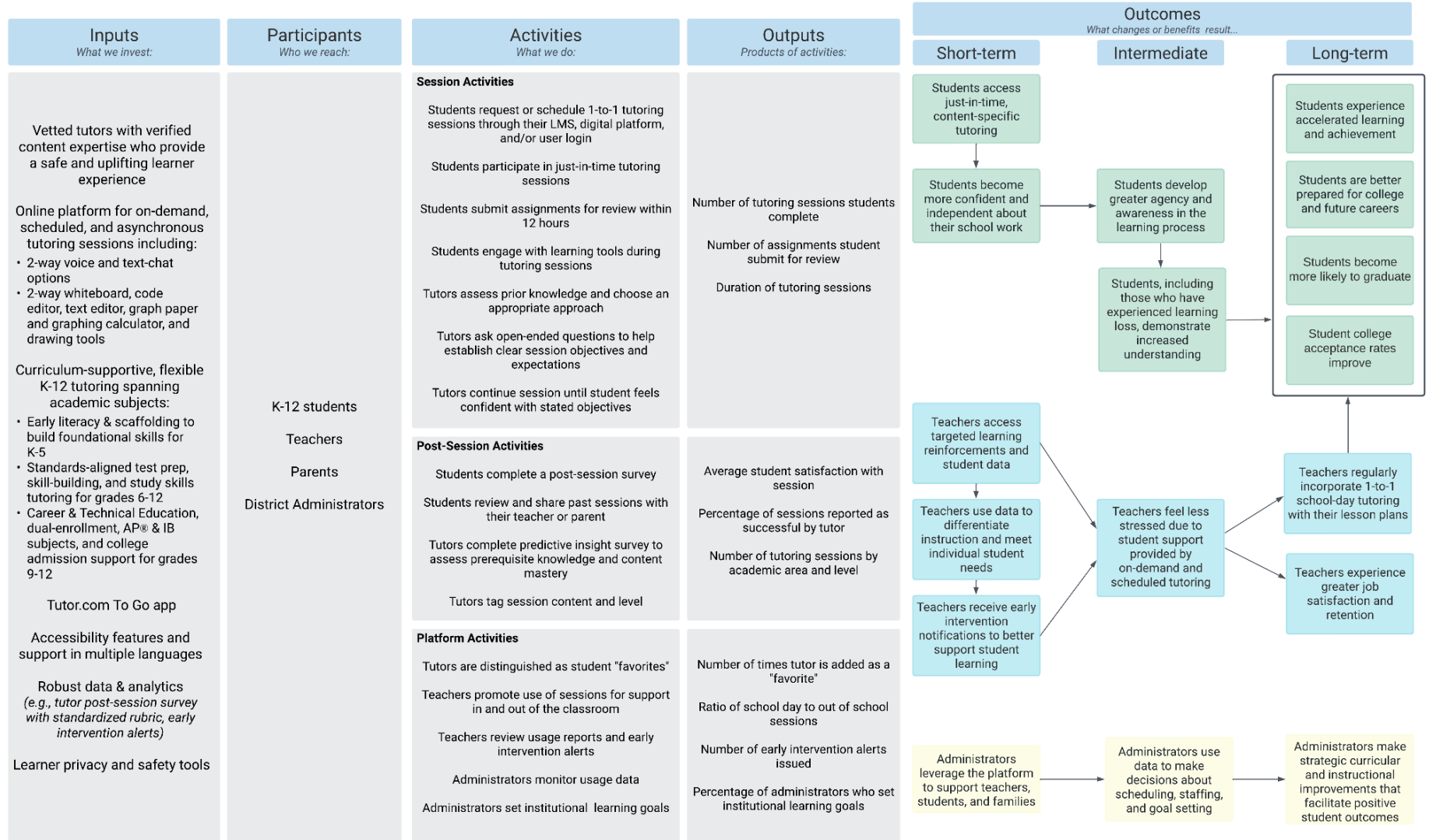
A logic model is a program or product roadmap. It identifies how a program aims to have an impact on learners, translating inputs into measurable activities that lead to expected results. A logic model has five core components: inputs, participants, activities, outputs, and outcomes (see Table 2).

Table 2. Logic model core components

Component	Description	More information
Inputs	What the provider invests	What resources are invested and/or required for the learning solution to function effectively in real schools?
Participants	Who the provider reaches	Who receives the learning solution or intervention? Who are the key users?
Activities	What participants do	What do participants do with the resources identified in Inputs? What are the core/essential components of the learning solution? What is being delivered to help students/teachers achieve the program outcomes identified?
Outputs	Products of activities	What are numeric indicators of activities? (e.g., key performance indicators; allows for examining program implementation)
Outcomes	Short-term, intermediate, long-term	Short-term outcomes are changes in awareness, knowledge, skills, attitudes, and aspirations. Intermediate outcomes are changes in behaviors or actions. Long-term outcomes are ultimate impacts or changes in social, economic, civil or environmental conditions.

LearnPlatform reviewed Tutor.com resources, artifacts, and program materials to develop a draft logic model. Tutor.com reviewed the draft and provided revisions during virtual meetings. The final logic model depicted below (Figure 1) reflects these conversations and revisions.

Problem Statement: Students often need specific, targeted assistance to understand content; for example, to clarify a complex concept, to catch up after missing school, or to complete homework and in-class assignments. Tutor.com promotes educational equity, opportunity, and achievement for all learners by providing live tutoring and assignment review through a network of qualified tutors in a virtual environment. The support provided by Tutor.com is learner-focused, creating opportunities for individualized just-in-time support that allows students to request on-demand, scheduled, and asynchronous sessions and progress beyond roadblocks or gaps in understanding.



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Figure 1. Tutor.com logic model

Tutor.com Logic Model Components. Tutor.com invests substantial resources into their platform, including vetted, qualified tutors who provide a safe and uplifting learner experience, an online platform for on-demand tutoring sessions, curriculum-supportive, flexible K-12 tutoring spanning academic subjects and assessments, the Tutor.com To Go app, accessibility features and support in multiple languages, robust data and analytics, and learner privacy and safety tools. Ultimately, the Tutor.com K-12 tutoring solution aims to reach students, teachers, parents, and district administrators.

K-12 students, teachers, parents, and district administrators can engage with the Tutor.com platform in three sets of activities that produce related quantifiable outputs: tutoring session activities, post-session activities, and general platform activities. Each of these types and their associated outputs are described below:

Session Activities

- Students request or schedule 1-to-1 tutoring sessions through their LMS, digital platform, and/or user login
- Students participate in just-in-time tutoring sessions
- Students submit assignments for review within 12 hours
- Students engage with learning tools during tutoring sessions
- Tutors assess prior knowledge and choose an appropriate approach
- Tutors ask open-ended questions to help establish clear session objectives and expectations
- Tutors continue session until student feels confident with stated objectives
- Outputs:
 - Number of tutoring sessions students complete
 - Number of assignments student submit for review
 - Duration of tutoring sessions

Post-Session Activities

- Students complete a post-session survey
- Students review and share past sessions with their teacher or parent
- Tutors complete predictive insight survey to assess prerequisite knowledge and content mastery
- Tutors tag session content and level
- Outputs:
 - Average student satisfaction with session
 - Percentage of sessions reported as successful by tutor
 - Number of tutoring sessions by academic area and level

Platform Activities

- Tutors are distinguished as student “favorites”
- Teachers promote use of sessions for support in and out of the classroom
- Teachers review usage reports and early intervention alerts
- Administrators monitor usage data
- Administrators set institutional learning goals
- Outputs:
 - Number of times tutor is added as a “favorite”
 - Ratio of school day to out of school sessions
 - Number of early intervention alerts issued
 - Percentage of administrators who set institutional learning goals

If implementation is successful, based on a review of program outputs, Tutor.com can expect the following short-term outcomes: students will have access to just-in-time content-specific tutoring support that results in students becoming more confident and independent about their school work. In turn, teachers will have access to additional targeted learning reinforcements and student data. Teachers will be able to use data to differentiate instruction and meet individual student needs, and receive early intervention alerts to better support student learning. Finally, administrators will have access to a range of service utilization data to support teachers, students, and families.

As implementation proceeds, students, including those who have experienced learning loss, are expected to develop greater agency and awareness in the learning process and demonstrate increased understanding. Teachers will feel more supported and less stressed and overwhelmed due to student support provided by on-demand and scheduled tutoring. As more teachers and students use Tutor.com in their classrooms, administrators will also benefit from longitudinal data about usage to set institutional goals for individuals and groups.

After a year or more of consistent usage, students, teachers, and administrators should see several positive long-term outcomes. Students experience accelerated learning and achievement, are better prepared for college and career, are more likely to graduate, and achieve improved college acceptance rates. Student learning outcomes are further supported by teachers’ improved ability to regularly incorporate 1-to-1 school-day and out-of-school tutoring with their lesson plans. The additional support might also prompt increased job satisfaction and overall well-being for educators. Finally, continued use will help administrators make strategic curricular and instructional decisions that facilitate positive student outcomes.

Study Design for Tutor.com Evaluation

To continue building evidence of effectiveness and to examine the proposed relationships in the logic model, Tutor.com has plans to conduct an evaluation to determine the extent to which its program produces the desired outcomes. Specifically, Tutor.com has plans to begin an ESSA Level III study to answer the following research questions:

- 1) To what extent did teachers and students engage with the Tutor.com platform?
 - a. How many tutoring sessions and assignment reviews did students request?
 - b. What was the range and average number of minutes per tutoring session?
 - c. What percentage of sessions were flagged for early intervention alerts?

- 2) Was student usage associated with:
 - a. A reduction in the number of Ds and Fs students received?
 - b. Higher course grades?
 - c. A reduction in absenteeism?
 - d. Progress on quarterly formative assessments?
 - e. Improved performance in gateway courses?

- 3) Was there an association between the percentage of tutoring sessions that generated an early intervention alert and student outcomes?

Tutor.com is in the process of recruiting district partners and plans to begin this study in early 2023.

Conclusions

This study satisfies ESSA evidence requirements for Level IV (*Demonstrates a Rationale*). Specifically, this study met the following criteria for Level IV:

- ✓ Detailed logic model informed by previous, high-quality research
- ✓ Study planning and design is currently underway for an ESSA Level III study

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