

# Tutor Co-Pilot

## *Cutting-Edge Research & Innovation*

**FEV Tutor & Ector County ISD**



NATIONAL STUDENT  
SUPPORT ACCELERATOR

*equalizing access to quality tutoring*



**Stanford**  
University

# Strategic Partnership

## Stanford University:

- [National Student Support Accelerator \(NSSA\)](#)
- High-impact tutoring, research, thought leadership

## FEV Tutor:

- [Multi-year partner with ECISD driving measurable gains on NWEA MAP Growth](#)
- Live 1:1 high-impact tutoring
- Outcomes-Based Contract (OBC)

## Ector County ISD:

- [Top-performing high-impact tutoring district nationally](#)

# Research Study Proposal (2023-24 Academic Year)

## AI Tutor Co-Pilot Evaluation

- Tool developed based on prior Stanford research
- Leverages the *pedagogical* knowledge of expert math teachers in teaching and combines with large language models.
- Provides real-time suggestions for tutors grounded in expert pedagogical practices.

# Why Tutor Co-Pilot?

- Leverage cutting-edge AI innovation to improve academic outcomes
- Deliver evidence-based high-impact tutoring for more students
- Secure and safe for schools and students using a tutor-facing LLM/AI model

# FEV Tutor's interface with the Co-Pilot

The screenshot displays the FEV Virtual Classroom interface. The main workspace shows a question and answer section with the text "Correct Answer: [object Object]" and buttons for "View Question", "View Notes", "Import question", and "Steps". A red arrow points to the bottom right corner of the main workspace. On the right side, a chat window is open, showing a list of messages:

**CHAT**

- Me (00:32): Hello!
- Attendee1 (00:39): hi
- Me (01:04): Let's start with your first problem
- Me (01:26): If Bob has 10 apples and gives 5 to Alice, how many apples does Bob have left?
- Attendee1 (01:35): 3?

Below the chat window, there is a text input field labeled "Type your message here...". At the bottom of the interface, there are buttons for "END SESSION" and "EXTEND MINS", and a "Remaining Time: 00:55:00" indicator.

# The tutor picks a strategy, the Co-Pilot generates an initial response, and the tutor can edit the response

The screenshot displays the FEV Virtual Classroom interface. At the top, a browser window shows a math problem: "A school bus has seats for 54 children. Today, 20 boys and 18 girls got on the bus. How many empty seats are there?". A green box with "I DO" is visible. Below the problem, a chat window titled "CHAT" shows a conversation: "Me (00:32): Hello!", "Attendee1 (00:39): hi", "Me (01:04): Let's start with your first problem", "Me (01:26): If Bob has 10 apples and gives 5 to Alice, how many apples does Bob have left?", and "Attendee1 (01:35): 3?". Below the chat, a purple banner reads "LET'S HELP THE STUDENT!" with a "MATH HELP" button. Underneath are "REGENERATE ALL" and "RESET STRATEGIES" buttons. The interface is divided into three columns: "ASK A QUESTION", "EXPLAIN A CONCEPT", and "CORRECT THE MISTAKE". Each column contains a response from the tutor and a "REGENERATE" button. The "ASK A QUESTION" response says: "That's a good try, but let's try to solve it together. If Bob originally has 10 apples and he gives 5 to Alice, we subtract 5 from 10. Can you try to do the subtraction?". The "EXPLAIN A CONCEPT" response says: "Not quite, this is a subtraction problem. Can you try to identify what we should be subtracting?". The "CORRECT THE MISTAKE" response says: "That's incorrect. The correct answer is 5 because  $10 - 5 = 5$ ". At the bottom, there are navigation buttons like "< 1 / 1 >", "REGENERATE", and "SEND". A footer contains "Rutof Privacy Policy Copyright © 2023 FEV Virtual Classroom" and "Click here to Perform System Check".

# Research Study (2023-24 Academic Year)

- **Questions:** How do tutors use an AI Tutor Co-Pilot? How does an AI Tutor Co-Pilot affect student engagement and academic growth?
- **Methodology:** Randomized Control Trial (RCT) riding on existing AY23-24 tutoring implementation.
- **Structure:**
  - Winter to Spring NWEA MAP Growth measuring student outcomes
  - Control group = live tutors (identical to existing FEV Tutor service)
  - Treatment group = live tutors with Co-Pilot feature
- **Timeline:**
  - RCT from January through May 2024
  - Study findings released around September 2024