

Jan 2026

# **Reclaim Attention:**

## AI-Augmented Scaffolding for ADHD College Students



**Entry to The Create+AI Challenge**

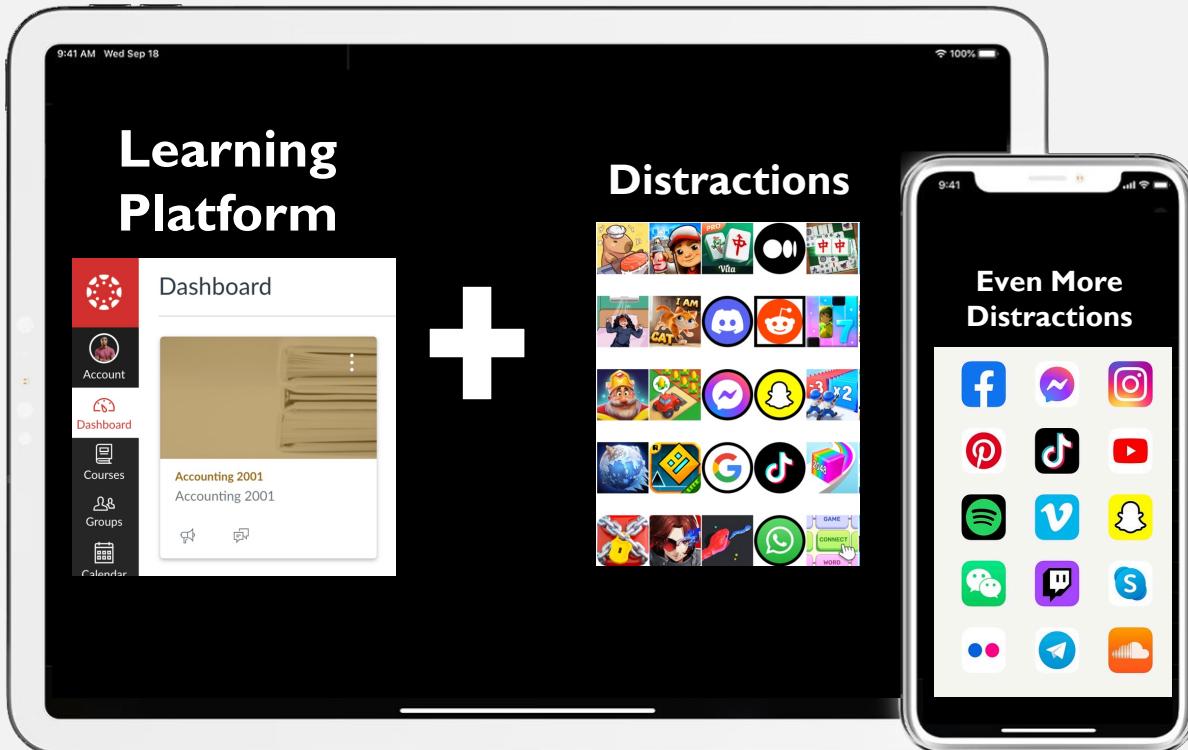
TRACK: Augment Learning

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# SUMMARY

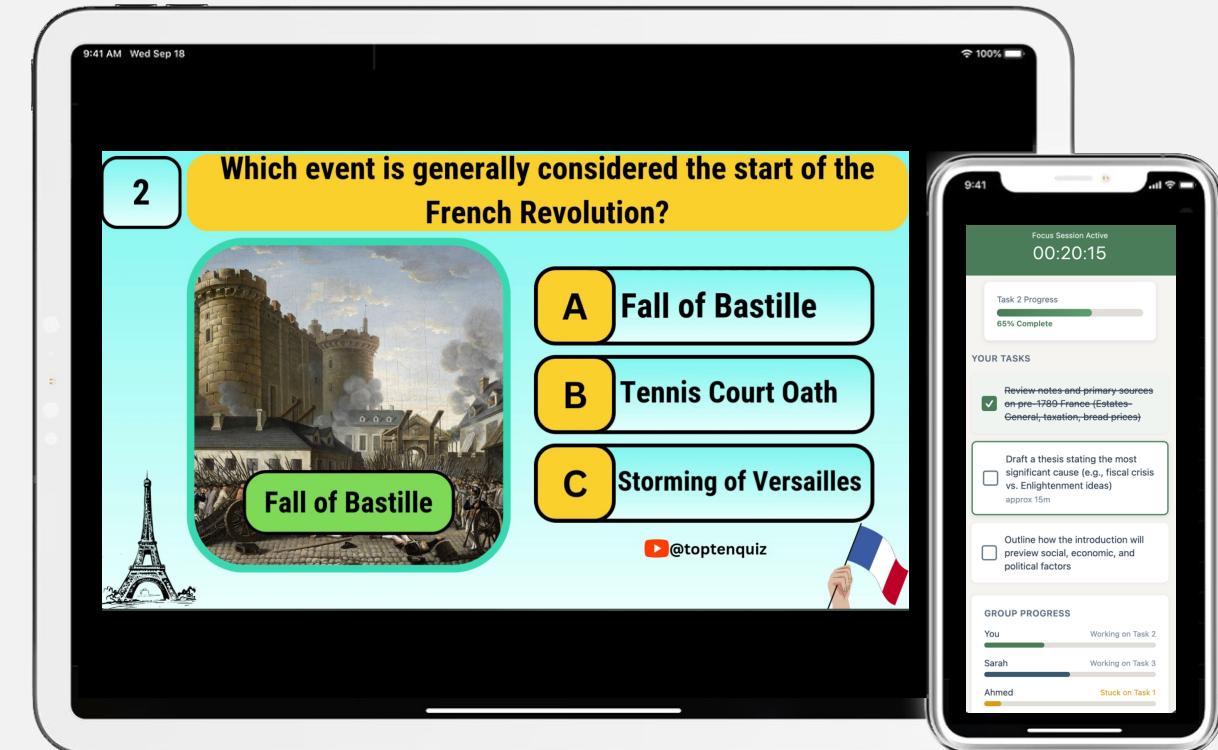
## Problem:

- Low-effort, high-stimulation escape hatches from tasks
- Reinforcement of avoidance cycles
- Worsening executive function under huge cognitive load

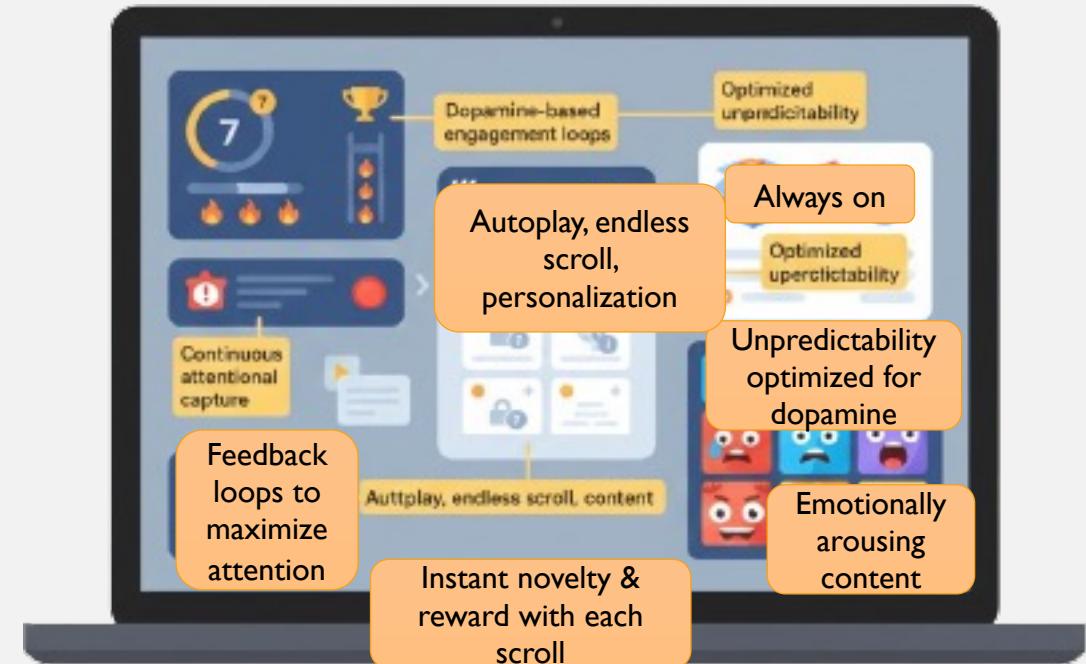


## Reclaim Attention Solution:

- Personalized Scaffolding for Self-Regulated Learning
- Task decomposition and active tracking
- Community/environment and external accountability



# PROBLEM AND TARGET AUDIENCE

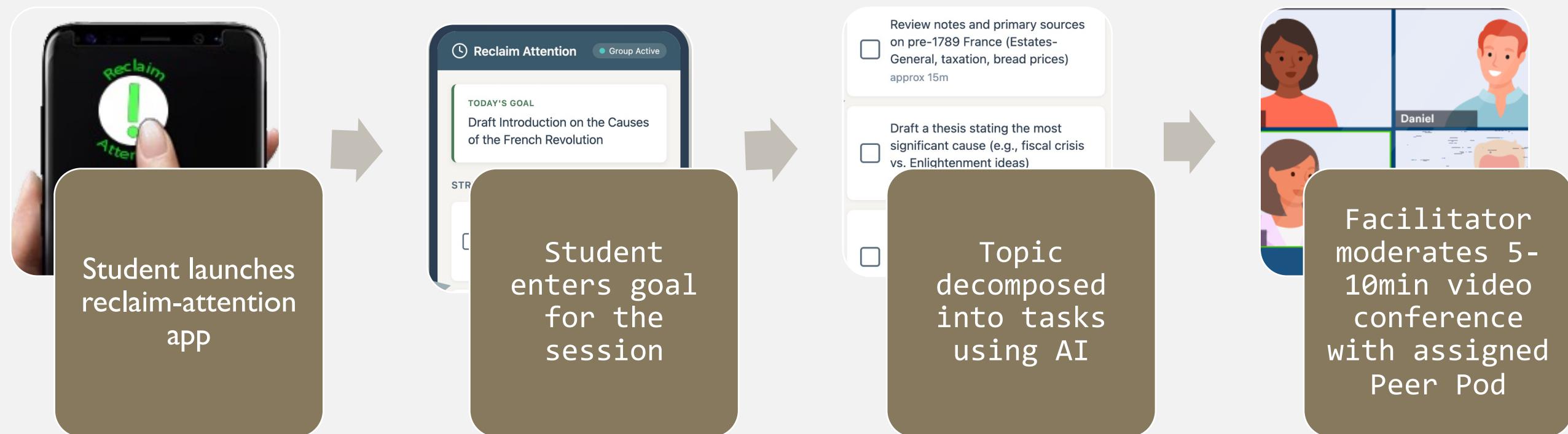


## Attention Economy

5.6% of entering college students in 2019 report having ADHD

(A National Cross-Sectional Study of the Characteristics, Strengths, and Challenges of College Students With Attention Deficit Hyperactivity Disorder)

# PROPOSED SOLUTION



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Student progress is estimated by screen snapshots of work machine

Focus Session Active  
00:00:4

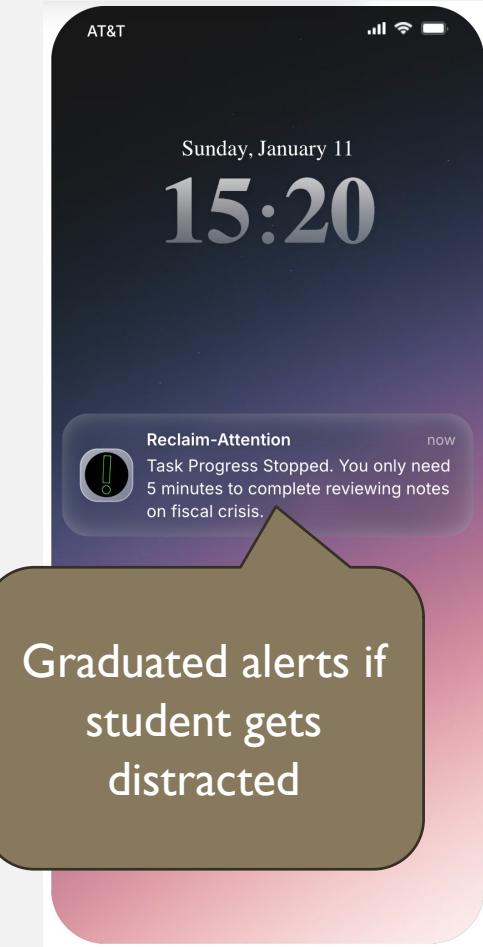
Task 1 Progress  
32% Complete

YOUR TASKS

Review notes and primary sources on pre-1789 France (Estates-General, taxation, bread prices) approx 15m

Draft a thesis stating the most significant cause (e.g., fiscal crisis vs. Enlightenment ideas) approx 15m

Outline how the introduction will preview social, economic, and political factors approx 15m



Graduated alerts if student gets distracted

Marking a step complete brings up a confirmation question

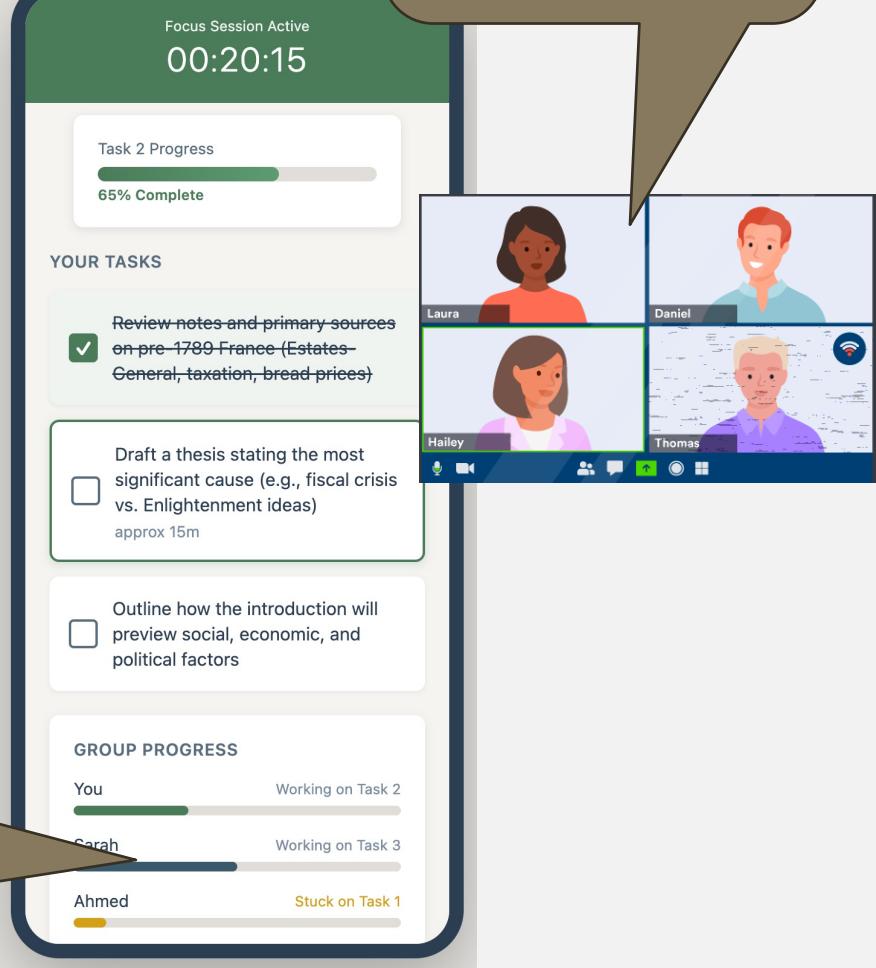
Step Complete: Reflecting on Progress

Quick comprehension check: By 1789, what percentage of a French worker's budget was spent on bread?

- About 30%
- About 50%
- About 90%

Pod can see progress of all other members

Session ends with another short video conference



# CONNECTION TO LEARNING SCIENCE AND RESEARCH

Category	Citation	Link	Summary of Findings	Application to Reclaim Attention
Neurocognitive Foundation	Barkley (1997, 2011, 2012)	<a href="#">PubMed</a>	ADHD is a response inhibition deficit under cognitive load. Executive functions fail at the point of performance under delay, abstraction, or competing stimuli.	Justifies real-time scaffolding as external executive system that offloads response selection when internal control fails.
	Executive Function Model	<a href="#">PMC</a>		
Motivation & Autonomy	Ryan & Deci (2000, 2020)	<a href="#">PMC</a>	External control undermines motivation. Autonomy-supportive contexts improve engagement and persistence.	Justifies reflective prompts over coercive blocking. AI as coach, not enforcer.
	Self-Determination Theory			
ADHD in Higher Education	DuPaul et al. (2021)	<a href="#">PubMed</a>	ADHD students earn lower GPAs, use fewer study strategies, and persist fewer semesters than peers.	Establishes need for interventions scaffolding study behaviors beyond accommodations.
	Academic Trajectories Study			
	CIRP/HERI Freshman Survey	<a href="#">CIRP</a>	5–6% of U.S. college freshmen report ADHD with functional impairment despite accommodations.	Validates ADHD as mainstream higher-education concern affecting significant population.
	Hotez et al. (2022)			
Attention Economy	Ward et al. (2017)	<a href="#">Journal</a>	Smartphone presence reduces working memory capacity. Effects strongest in individuals with lower attentional control.	Frames distraction as environmental problem. Supports technology-mediated countermeasures.
	Brain Drain Study			
	Fogg (2003)	<a href="#">Book</a>	Digital platforms use variable rewards, interruptions, and social validation to capture attention.	Explains why ADHD students are disproportionately harmed. Justifies counter-design approach.
	Persuasive Technology			
Trace-Based Scaffolding	Lim et al. (2023)	<a href="#">Article</a>	Real-time, analytics-triggered scaffolds outperform static supports in promoting self-regulated learning.	Supports screen traces, adaptive interruption, and AI-driven personalized scaffolding.
	Analytics-Based Scaffolds			
	Winne & Hadwin (1998, 2008)	<a href="#">PDF</a>	Learners often fail to detect self-regulation breakdowns as they occur.	Justifies continuous trace collection to detect breakdowns students miss.
	COPES Model			
	Scheithauer & Kelley (2017)	<a href="#">PubMed</a>	Self-monitoring interventions improve ADHD symptoms, academic behaviors, and GPA in college students.	Supports AI-triggered reflection prompts to build metacognitive awareness.
Social Co-Regulation	Anastopoulos et al. (2021)	<a href="#">PubMed</a>	Group-based CBT improved executive functioning, self-regulation, and time management in ADHD college students.	Validates group environments as therapeutic. Peer Pods digitize group co-regulation.
	ACCESS Study			
	Hadwin, Järvelä, & Miller (2011)	<a href="#">Article</a>	Self-regulated learning can be supported through collaborative regulation in group contexts.	Validates peer-to-peer accountability as legitimate co-regulation strategy.
	Socially-Shared Regulation			
Just-in-Time Interventions	Nahum-Shani et al. (2018)	<a href="#">PMC</a>	JITAIIs deliver support at the right time by adapting to dynamic internal and contextual states.	Framework for timing-based interventions at moments of distraction vs. scheduled reminders.
	JITAI Framework			
	Ebner-Priemer et al. (2021)	<a href="#">Article</a>	ADHD symptoms fluctuate dynamically with context, making them well-suited for JITAI approaches.	Explicitly links ADHD to need for real-time, context-aware interventions.
	JITAIIs for ADHD			

# EXPECTED OUTCOMES AND HOW RESULTS WILL BE MEASURED

## Measurement Framework

- **Pre-Post Survey for every Cohort**

- The primary psychometric instrument will be the Motivated Strategies for Learning Questionnaire Short Form Revised (**MSLQ-SFR**).
- Validates Interest, Self-efficacy, and Attribution (Cook & Skrupky, 2024).
- Assess ADHD prevalence using the **ASRS-v1.1**

- **In-App Metrics**

- **Trace Data:** Rate of rapid context switching
- **Distraction Time:** Percentage of study session time spent in "distracting" contexts.
- **Recovery Latency:** The "time-to-return-to-task" following a prompt.

## Expected Outcomes

- ↑ Interest in Academic Tasks
- ↑ Self-Efficacy
- ↑ Adaptive Attribution

## Core Goal

We want to make the system widely accessible to young adults across socioeconomic and neurodiversity constraints:

## Fairness & Accessibility Considerations

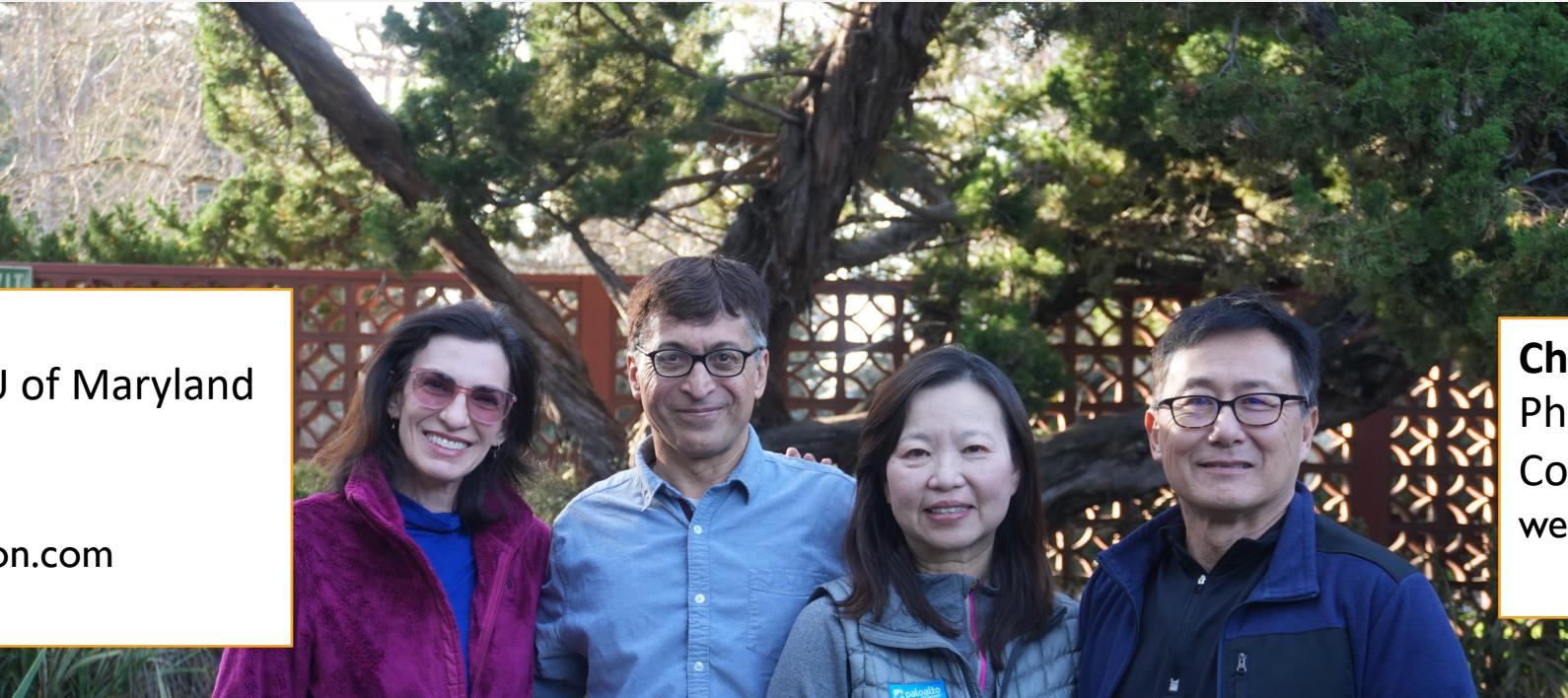
- **No High-End Device Requirements**
- **Peer-Based Support Model**
- **Adaptive Trace Monitoring Frequency**
- **Gracefully Tolerate AI Latency**

# 2026 TIMELINE + MILESTONES

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Pilot1	Summer 2026 →												
Pilot2	Fall 2026 →												
Pilot3	Winter 2027 →												

	Pilot 1	Pilot 2	Pilot 3
Pod Structure	1 pod: 3 students + 1 facilitator	2 pods with 2–3 students each + 2 facilitators	3 pods with 2–3 students each + 2 facilitators
Setting	In-person	Blended: mix of in-person and remote	Blended: mix of in-person and remote
App Capability	Task decomposition and basic task tracking	Digital pod formation + Pod Manager dashboard	Full feature set including AI nudges and context awareness
Facilitator Role	Facilitator provides active, hands-on guidance	Facilitator manages pods and resolves coordination issues	Facilitator supervises and handles exceptions only
Primary Goal	Validate pod model and task-scaffolding workflow	Test hybrid delivery and facilitator tooling	Validate AI as primary scaffolding layer

# TEAM BIOS



## Jules Sherman

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# BUDGET SUMMARY, FUNDING REQUESTED AND INTENDED USE

Execution of Field Trials						
Phase	Num of Pods	Students	Facilitator Cost (\$60/session)	Student Cost (\$10/session)	Pre-Post Survey (\$60/interview)	Subtotal
Pilot 1	1	3	\$3k	\$1.5k	\$0.4k	\$4.9k
Pilot 2	2	6	\$6k	\$3k	\$0.7k	\$9.7k
Pilot 3	3	9	\$9k	\$4.5k	\$1.1k	\$14.6k
<b>Total</b>						<b>\$29.2k</b>

Tool Development	Estimated Hours	Estimated Cost (USD)
Build session start/end, timing, and flow enforcement	90	\$5.4k
AI-driven breakdown of student goals into actionable tasks	40	\$2.4k
Basic heuristics to infer progress from screen captures	50	\$3.0k
Real-time pod presence and shared progress indicators	45	\$2.7k
Integrate pre- and post-session video calls using existing APIs	25	\$1.5k
Basic sensitive-data redaction and privacy controls	25	\$1.5k
System testing across OS, browsers, and failure modes	30	\$1.8k
<b>Total</b>		<b>\$18.3k</b>

total funding of **\$47,500** to support the development and field validation of "Reclaim Attention."