



Opportunities for Innovation to Support Teaching and Learning

TACTE Spring Conference

February 10, 2025

Breakout 1: 11:00-11:45 AM

AGENDA

- Educator Labor Market Data
- Updates to the Future Teacher Scholarship
- Opportunities for AI in Education
- Q & A





SCORE

State Collaborative
on Reforming Education

SCORE believes all Tennessee students deserve success in college, career, and life.

We are an independent, nonprofit, and nonpartisan advocacy and research institution, founded in 2009 by Senator Bill Frist, MD, former US Senate Majority Leader.

Access to great teaching and leadership is essential for student achievement



- All Tennessee students must have access to a reliable, effective, and diverse educator pipeline.
- SCORE highlights innovative practices and initiatives to support educators



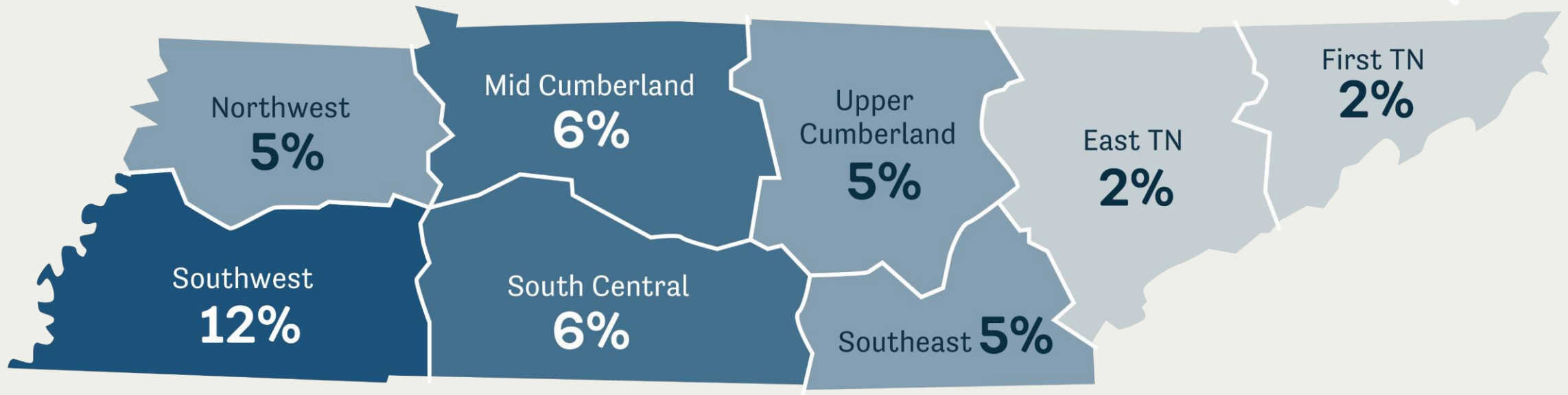
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Staffing needs are localized and vary by geography and endorsement area

- Special education, ESL, world languages, early childhood, and secondary math experience the highest vacancy rates



Staffing challenges remain as leaders issue emergency credentials to staff vacancies

- Teacher vacancies have increased
- Permits have more than doubled, but are also available to more teachers

	2021-22	2022-23	2023-24
Vacancies	1,024	1,009	1,434
Teaching Permits	1,960	3,579	5,061
Endorsement Exemptions	380	693	946



Administrators express challenges staffing open positions with high-quality teachers

- Rural district leaders overwhelmingly do not believe Tennessee's pipeline produces enough effective teachers

How challenging is it to recruit the following kinds of teachers to your school?	Admin reporting challenges
Instructionally effective teachers	65%
Teachers with necessary qualifications for vacancies	64%
Teachers who will stay at my school	52%
Racially/ethnically diverse teachers	71%



Many students do not have access to a reliable, effective, and diverse educator pipeline

- Disparate access to qualified and experienced teachers based on income

Teacher Experience and Licensure	High-Poverty Schools	Low-Poverty Schools
Inexperienced teachers	24.1%	13.3%
Teachers with temporary permits	3.6%	0.3%
Teachers with endorsement exemptions	0.7%	0.2%



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Tennessee's Future Teacher Scholarship

- **TCA 49-4-701**
- Last dollar scholarship to cover EPP tuition and fees
- Undergraduate junior/senior teacher candidates
- Tennessee HOPE eligible
- 4-year teaching commitment
- High needs counties and subject areas of shortage



Challenges with Scholarship Access

- Limited number of teacher candidates are eligible
- Scholarship amounts are unclear
- Teaching commitment does not mirror the award
- Difficulty planning four years after graduation



SB682/HB504 Scholarship Updates




- Flat dollar award amount of \$5,000 annually
- All EPP candidates seeking initial licensure
- Remove HOPE eligibility
- Two-year teaching commitment
- Extend pilot program to 2030



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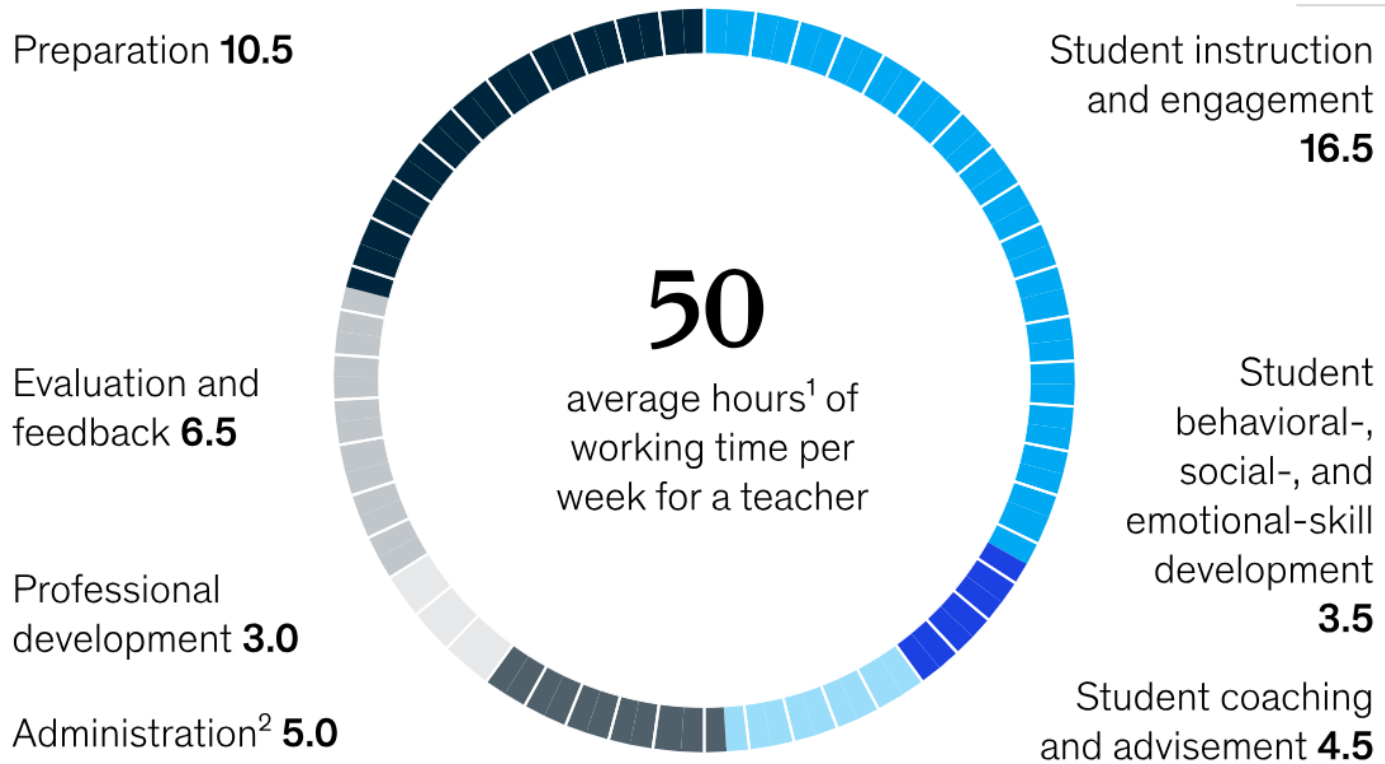




Generative artificial intelligence (GenAI) is changing the workforce rapidly; therefore, **education must respond and evolve now to equip students with desirable skills for future careers.**



GenAI presents Tennessee with an opportunity to reimagine teaching and learning



- Accelerate student learning
- Activate student creativity and problem-solving
- Prepare students to access jobs of the future
- Enhance instructional capacity and quality
- Reduce teacher tasks not related to teaching



Nationally, K12 students, college undergraduates, and teachers are optimistic about AI's potential

STUDENTS

I would prefer my teachers learn about new technologies like AI chatbots and incorporate them into lessons



TEACHERS

AI chatbots have the potential to help me grow as a teacher



If used to its highest potential, AI chatbots can help my students learn more and faster

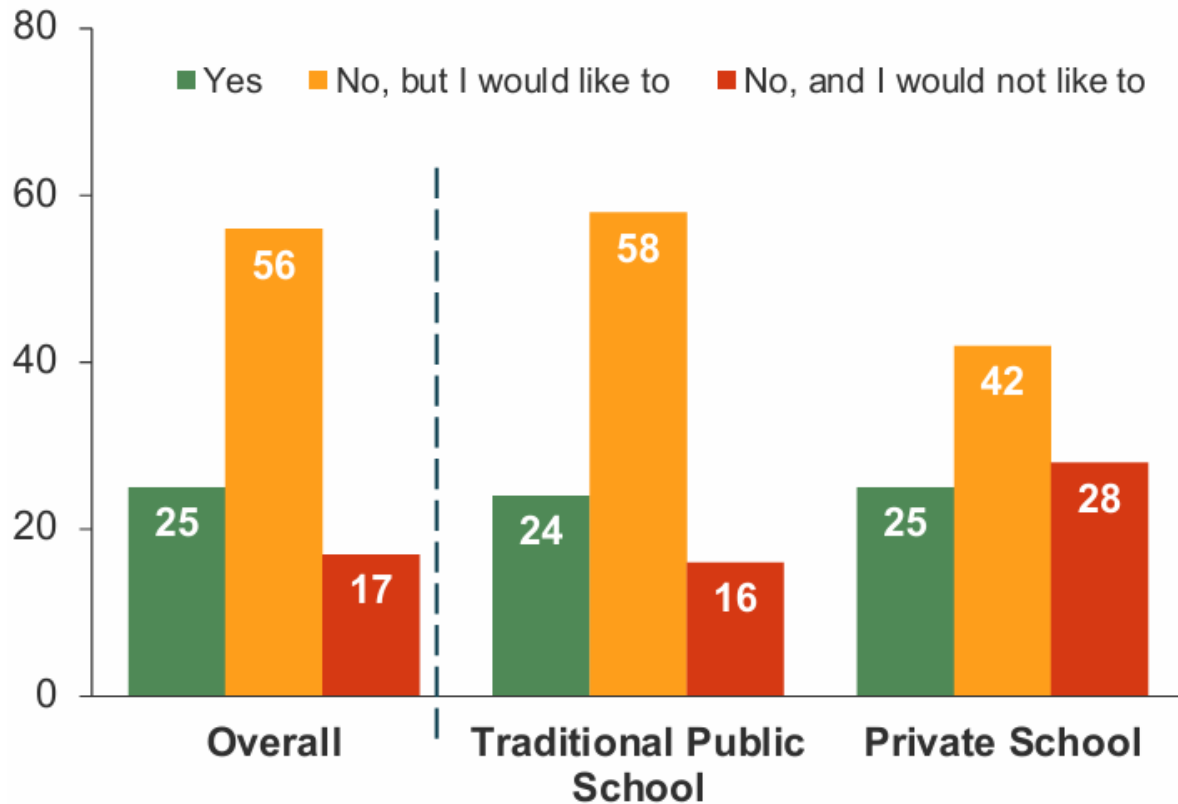


■ Agree - Strongly
■ Agree - Somewhat



Research reveals a need for AI support

Have you received training or professional development on how to use AI chatbots in the classroom?




- Advantaged districts provide more AI teacher training; these teachers are more likely to be AI users
- District leaders see transformative potential for supporting the teacher workload and instructional quality
- Support for teachers and leaders is desired and needed to mitigate a third "digital divide"



Khanmigo

- **Khan Academy personal tutor**
- Math tiers II and III tutor pilot in Hamilton County Schools grades 6-8
- Integrates NWEA MAP math screener data to target remediation
- University of Toronto research partner to evaluate impact



Khanmigo
AI power

This conversation is recorded and viewable by your parent and teacher.




Can you just tell me the answer?

It's important that you learn how to do this yourself! What do you think you need to do to multiply 2 by $5/12$?

They need the same denominator.

That's a good thought, but in this case, you don't need to find a common denominator because you're multiplying, not adding or subtracting. What else could you try?

Type message (do NOT share any personal data)

  Clear chat 

I want to check my students understanding at the end of class, do you have an exit ticket that I could use for this lesson?

Of course! An exit ticket is a great way to quickly assess your students' understanding at the end of the class. Here's a suggestion for an exit ticket related to HSA-SSE.A.1:

Provide your students with the following algebraic expression:

$$3x^2 - 5x + 2$$

Ask them to complete the following tasks:

1. Identify the terms in the expression.
2. Identify the coefficients and the constant term.
3. Write an expression for the term with the highest degree.

This exit ticket will help you assess whether your students can recognize the different components of an algebraic expression and understand the concept of degree. You can collect their responses and review them to identify any misconceptions or areas where students may need additional support. Remember to keep the exit ticket brief and focused on the key concepts from the lesson.

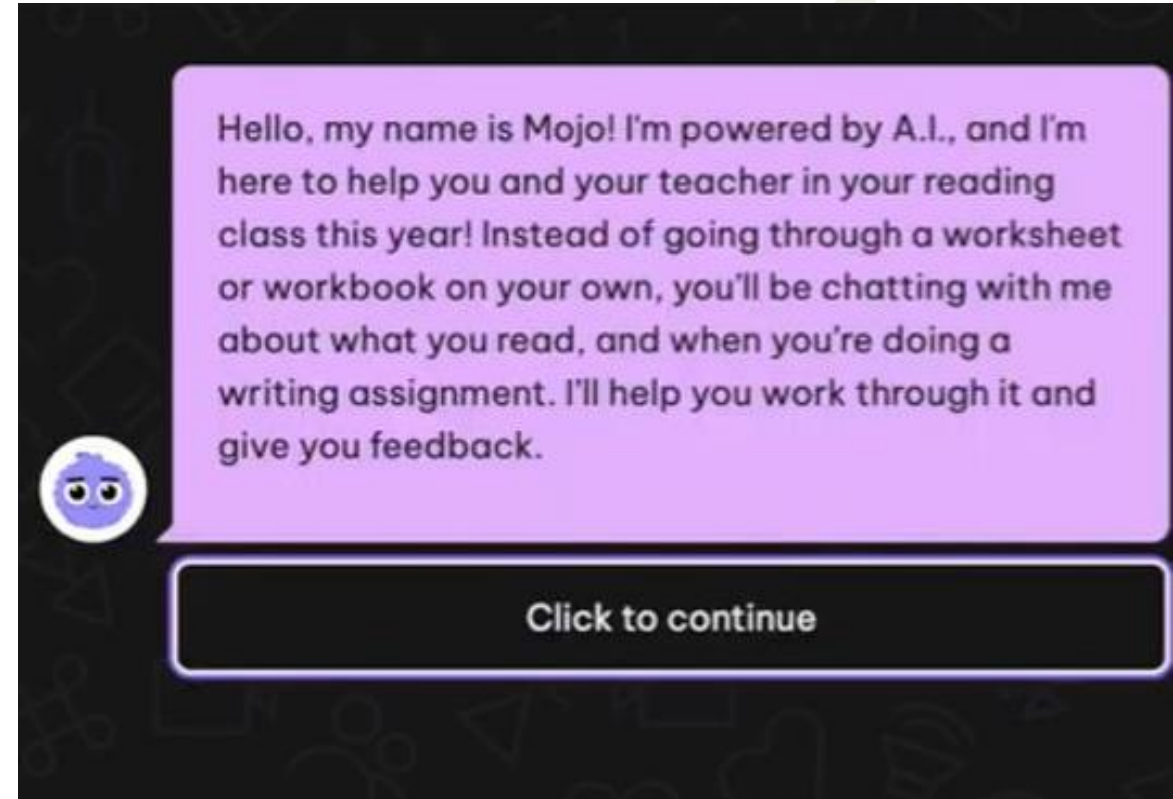
Good luck!

Type message (do NOT share any personal data)



CourseMojo

- **Tutor and teacher assistant**
- Integrates Tennessee's ELA high-quality instructional materials
 - Wit & Wisdom, EL, and myPerspectives (Savvas)
- Sumner County Schools pilot with high teacher and student engagement
- Tier 1 ELA Hamilton County Schools 6th grade pilot





Two Roads

Ch 4, pages 38-40

Miz Euler is right pleased. Not only has she gotten her knife and kettle back, but the two shiny silver coins Pop is placing in her palm are fair payment for her purloined pullets.

"You take half, Will," she tells Pop.



"I cannot," he says, his voice soft and gracious. "What Cal and I did was not for money."

Miz Euler puts the coins into a front pocket in her apron as she turns away quickly.

"Thanks you and bless you," she says, her voice chocking a little on those words. Then she turns back to us, a smile again on her face.

"Well," she says, "there was no way I was going to allow you to refuse a sit-down dinner and night's lodging."

"A dollar means a lot to a widow woman," Pop says to me as we walk down Miz Euler's lane.

It's the following morning. We've not just had a huge dinner last night, but a breakfast this morning big enough to satisfy the appetite of a grizzly bear.



Welcome back! ★ Now we're diving into a passage (or excerpt) from Chapter 4 of Two Roads.

You can see the passage on the left. 📖

Using text evidence, explain how living as hoboes has impacted Cal and Pop's values.

Pop and Cal demonstrate good values so far. They let Miz Euler keep her dollar instead of charging her for their help.

Great work citing a specific example! Now try adding in some historical context from the Great Depression.



Ms. Quick

17 mins ago

Excellent work revising your topic sentence and citing evidence. Please add two elaboration sentences to complete your paragraph!

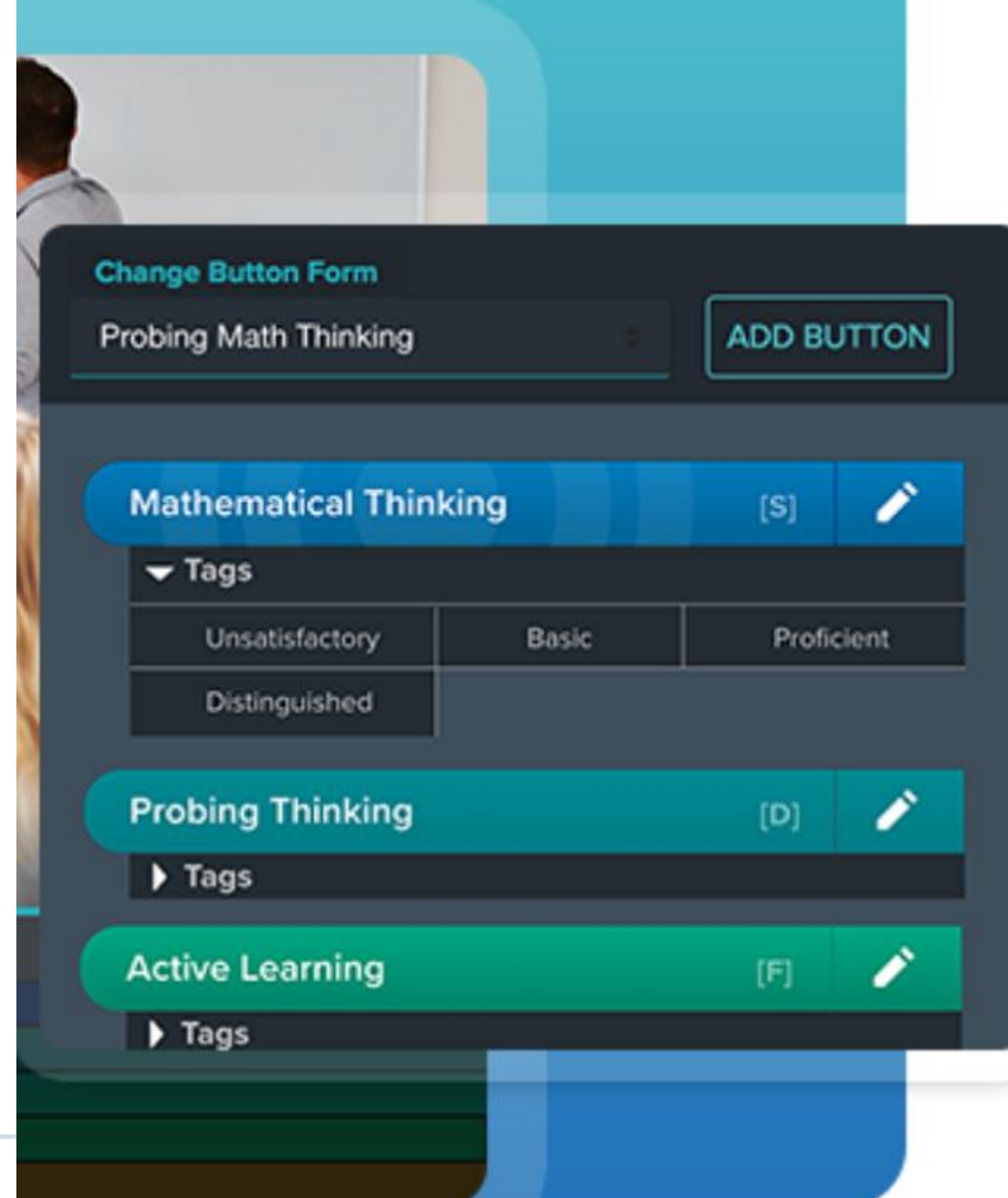
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Thanks! I'm on it.



Vosaic

- **Teacher observation tool**
- Rubric alignment, supervisor feedback, teacher self-reflections, and best practices
- AI identifies video evidence aligned with rubric and questioning
- Daemen University EPP teacher candidate prep





Elements of Instruction		Custom (for this video only)	
AC	Evidence Based Practices		Evidence
AC	Math Content Knowledge		Math C
AC	Individualized Instruction		Individual
AC	Assessment		Assessment
AC	Other		

Moments Form Transcript **NEW**

View Moments From:
Mine

Total Clips: 5

Export Clips Delete All Moments

- Evidence Based Practices
- Math Content Knowledge

▶ Play All

Math Content Knowledge

1 ▶ ⏪ 00:06 - 00:11 ⏩

05/19/2022 at 14:24

AC This is my story.

Math Content Knowledge

2 ▶ ⏪ 00:38 - 00:43 ⏩

- Individualized Instruction

Nectir

- Higher education course assistants
- Tutoring, course management, college advising, student insights
- Increase in GPA, motivation to learn, and self-efficacy
- California Community Colleges network adoption 2024-25 year

AI Course Assistant Results



VS



3.34 ✓

GPA



2.77

AVERAGE FINAL SCORE

88.27 ✓



77.89

Likert self-report

MOTIVATION

Likert self-report

4.92 ✓



3.61

Likert self-report

SELF-EFFICACY

Likert self-report

4.27 ✓



3.77





P PSYC 105 CA



PSY-FI PSYC 105 Course Assistant. Say...

Settings

New Ch

+ Create Assistant

Workspace Assistants

P PSY-FI PSYC 1... psyc-1...



That's a great connection! You're absolutely right. Cognitive-Behavioral Therapy (CBT) does align with the concept of a growth mindset. Both involve recognizing that our thoughts and behaviors are not fixed and can be changed.

In CBT, the therapist helps the client identify negative or harmful thoughts and behaviors, and then works with them to develop strategies to change these into more positive or helpful ones. This process can lead to significant improvements in the client's mood and overall mental health.

Just like with a growth mindset, the goal of CBT is to help individuals understand that

Regenerate response

Write a message...

Training data

Settings



CareerVillages AI Coach

- **Career development coach**
- Network of volunteers originally answered student questions – now AI supported
- AI chatbot that enables large-scale advising
 - Early stage career exploration
 - How does coursework fit into career goals
 - Study habits, resumes, mock interviews, cover letters



Module

65-105 min

Build career development skills

Develop essential skills for career development. This module covers time management, communication, and interpersonal skills, while providing a foundation for



Module

55-80 min

Prepare for higher education

Navigate the complexities of preparing for college. Find schools that match your goals, choose the right major, understand the FAFSA application process, and prepare



< Prepare for a career: What skills do I need to learn? Restart

Mark as Complete

Go to Survey

the key skills needed for your dream career. To get started, which job or industry are you aiming for?



A

Amanda

I'm not sure. I love art, but I also love math.

A

Coach

That's a great combination! There are several exciting career paths that blend both art and math. Here are a few options:

1. **Architect:** Combines creativity in design with mathematical precision in structures.
2. **Graphic Designer:** Uses art for visual communication and math for layouts and

Message Coach



Coach can sometimes make mistakes. Verify important facts.

Tips

- Don't hesitate to ask follow-up questions for a deeper understanding.
- Be honest with Coach about your interests, skills, and things you might struggle with.
- Whenever you think the activity has reached a natural stopping point, you can tell Coach and it will help you finish the activity.



Principles for Wise Discovery



- Keep the human in the loop
- Learn with and about AI through literacy and training
- Research pilots and report learnings broadly
- Enable learning acceleration for all
- Keep gaps in access in mind
- Ensure safety, ethics, and security



GenAI capability will be best leveraged with the **creativity** that a teacher or student — the human — can apply to it. Effective use must be learned, modeled, and practiced.

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Questions?