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# InstructSTEM

Rooting Practice in Pedagogy

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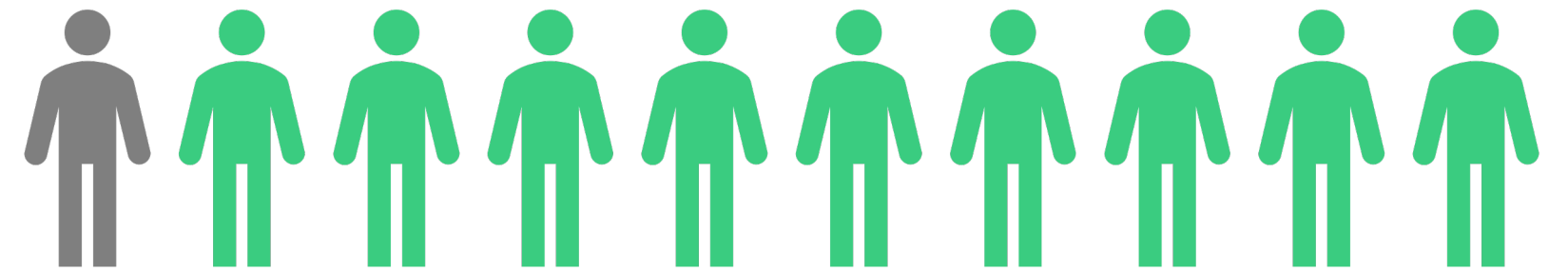


# Education Today

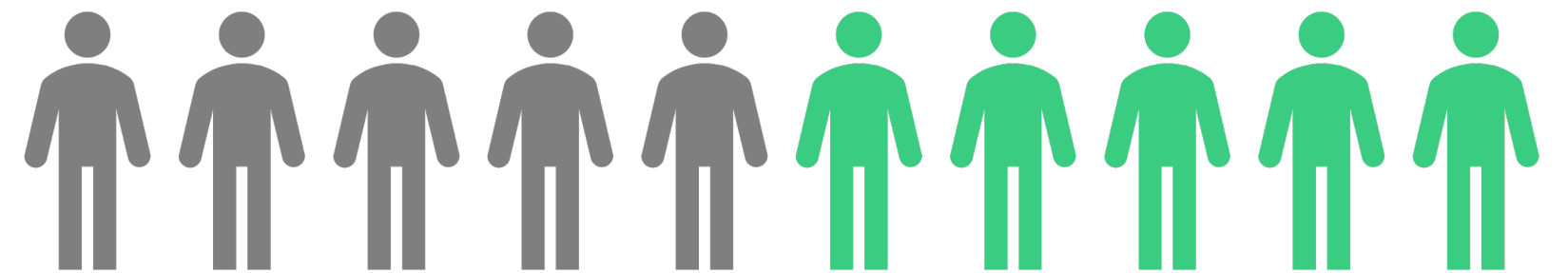


# Education Today

High School  
Educators



College  
Educators





# Education Today



On average, only **30%** of students complete STEM degrees.

■ Complete ■ Incomplete

(Eagan et al., 2015)



# Education Today

# #1

Poor student performance is the leading predictor of attrition.

(Chen, 2013)

# InstructSTEM

STEM Instructor Accelerator Program

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## Educational Best Practices

Learning Sciences,  
Instructional Design, and more

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Learning Sciences,  
Instructional Design, and more



## Contextualized Practice

Concepts applied to  
instructors' disciplines.



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## Educational Best Practices

Learning Sciences,  
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## Contextualized Practice

Concepts applied to  
instructors' disciplines.



## Interaction with Experts

Discuss concepts with peers  
and instructional designers.

# Personalized and Adaptive



# Personalized and Adaptive

**Prior Knowledge**



# Personalized and Adaptive

**Prior Knowledge**

**Performance**



# Personalized and Adaptive

## Prior Knowledge

Instructors take pre-tests, and module content is tailored accordingly.

## Performance



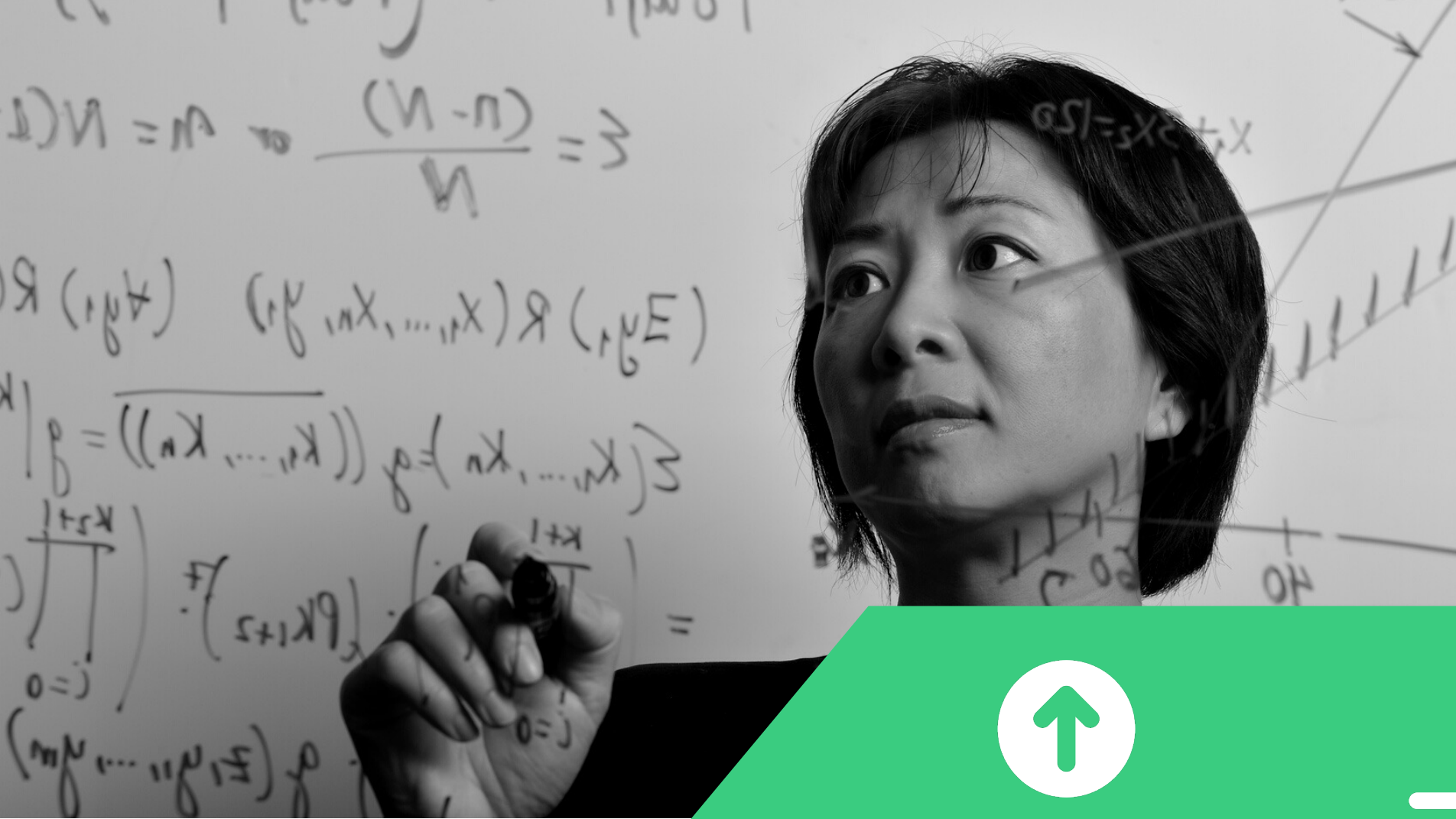
# Personalized and Adaptive

## Prior Knowledge

Instructors take pre-tests, and module content is tailored accordingly.

## Performance

Instructors engage in interactive activities that provide real-time feedback.



**STEM**

**Teacher Training**



**STEM**

**Employment Gap**



# Thank you!

## References:

Chen, X. (2013). STEM Attrition: College Students' Paths Into and Out of STEM Fields (NCES B2014-001). *National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education*. Washington, DC.

Eagan, K., Hurtado, S., Figueroa, T., & Hughes, B. (2015). Examining STEM pathways among students who begin college at four-year institutions (Commissioned Paper Prepared for the Committee on Barriers and Opportunities in Completing 2- and 4-Year STEM Degrees). Washington, DC: *National Academy of Sciences*. Retrieved from [http://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse\\_088834.pdf](http://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_088834.pdf)

InstructSTEM Market Research Study (2023)

