How Does Technology Fit into MTSS?

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- Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Assistive Technology Professional (ATP) Certified
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Outcomes

- Define the concept of supportive technologies
- Explain how supportive technologies and assistive technologies fit into MTSS
- Identify at least 3 examples of supportive technologies
- Identify at least 2 factors that are necessary for supportive technologies to impact student performance

Central Question for Today -

How Do Technologies Fit into MTSS?

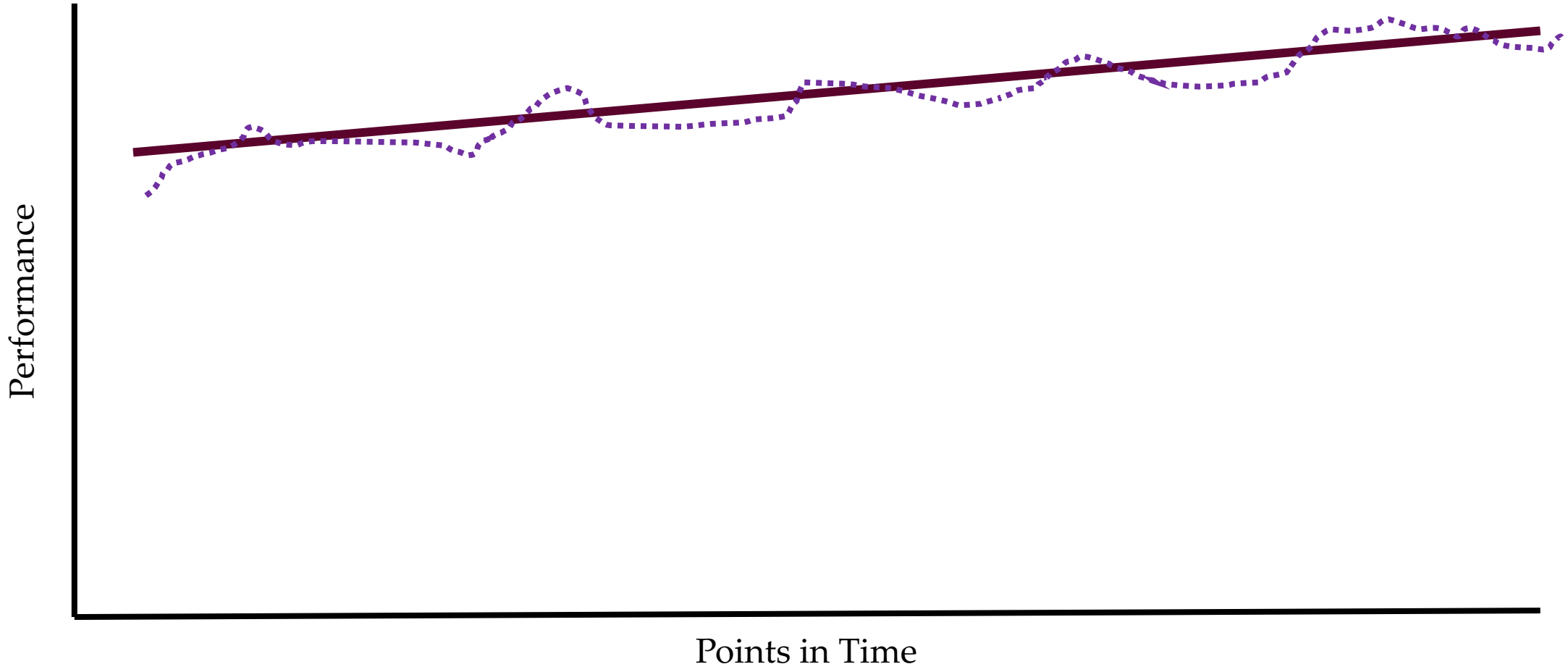
What this Presentation is NOT

- An in-depth discussion of technologies related to progress monitoring or instructional/educational technologies
- An advertisement for specific technology solutions
- Focusing solely on students in special education

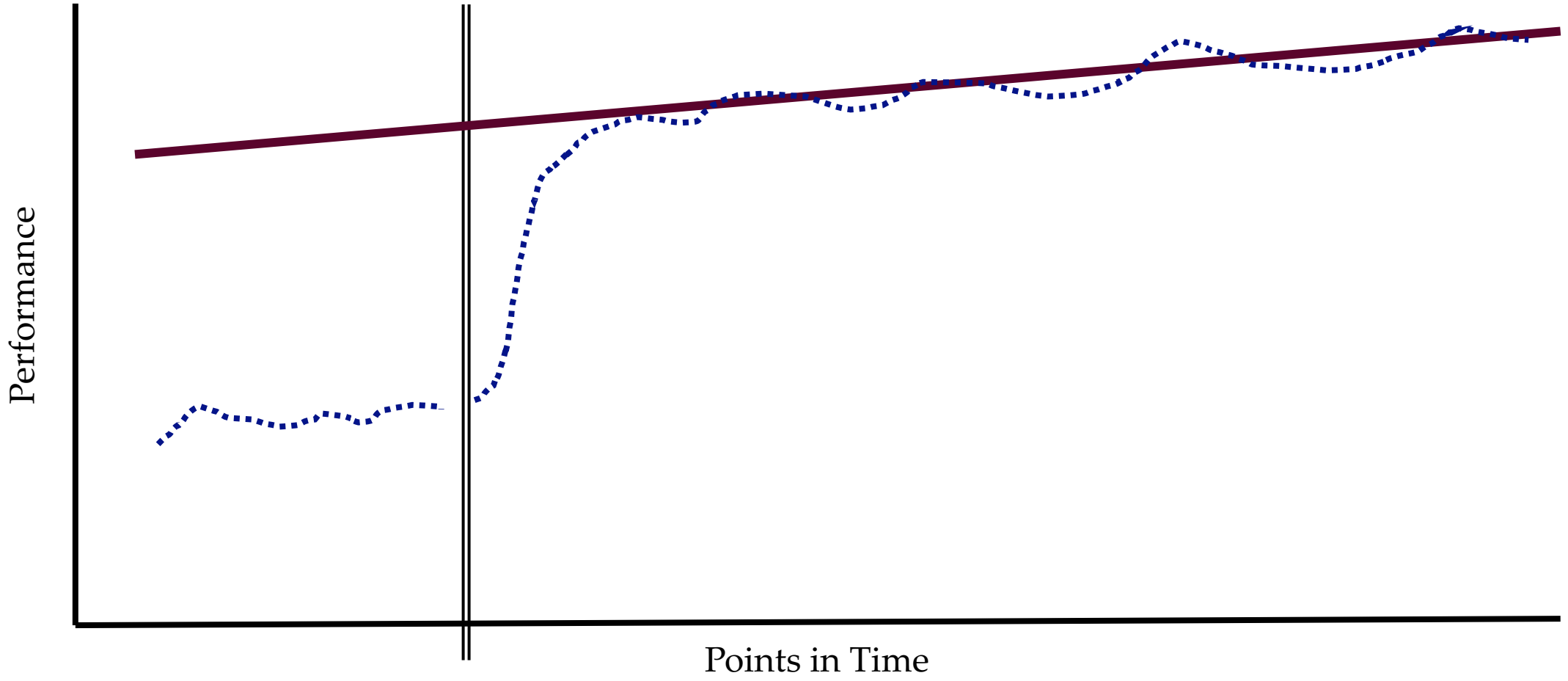
How Many People Have Worked with Students Who Have Had Difficulty with One or More of the Areas Below?

Reading Decoding	Reading Comprehension	Memory	Organization	Planning Through Tasks
Handwriting	Typing	Spelling	Grammar and Punctuation	Sentence Generation
	Written Organization	Math Computation	Math Notations	

Let's Talk About Student Growth



Let's Talk About Student Growth



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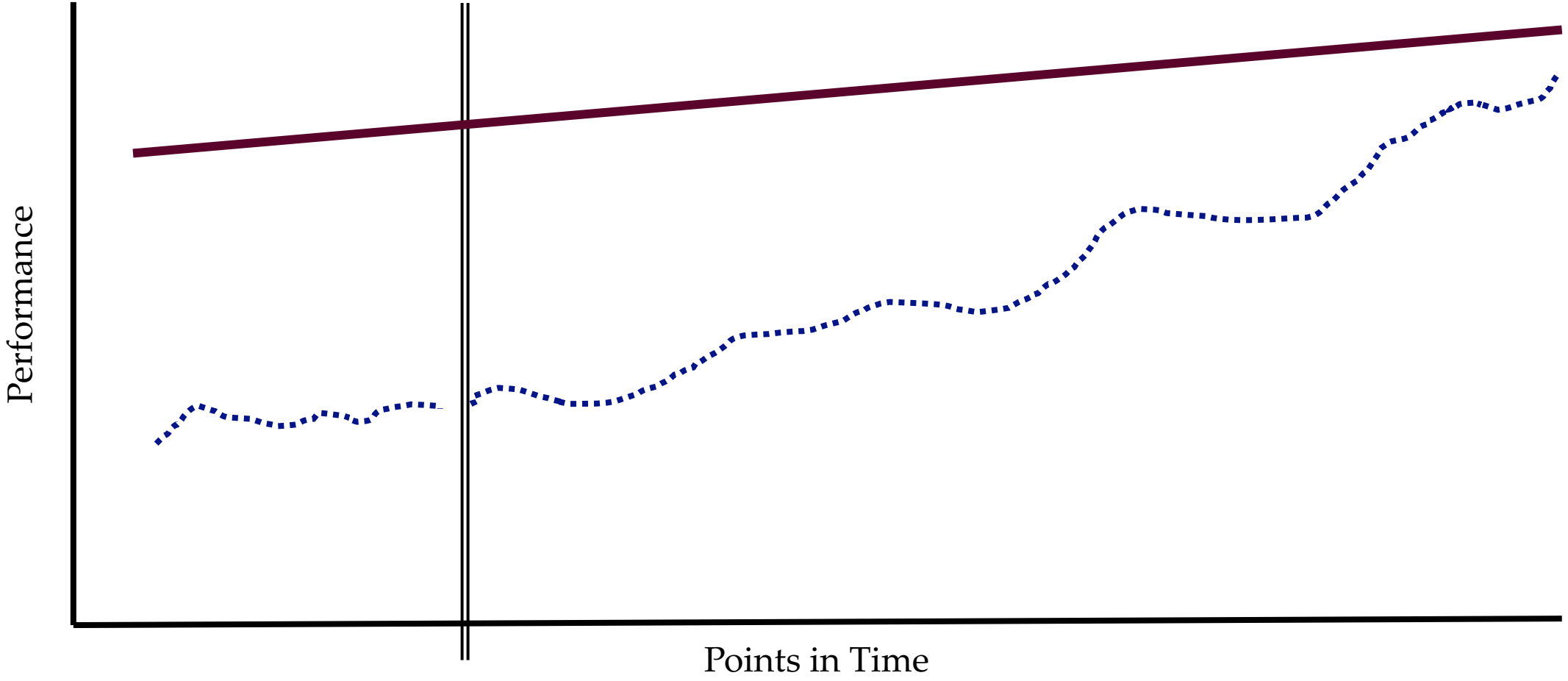

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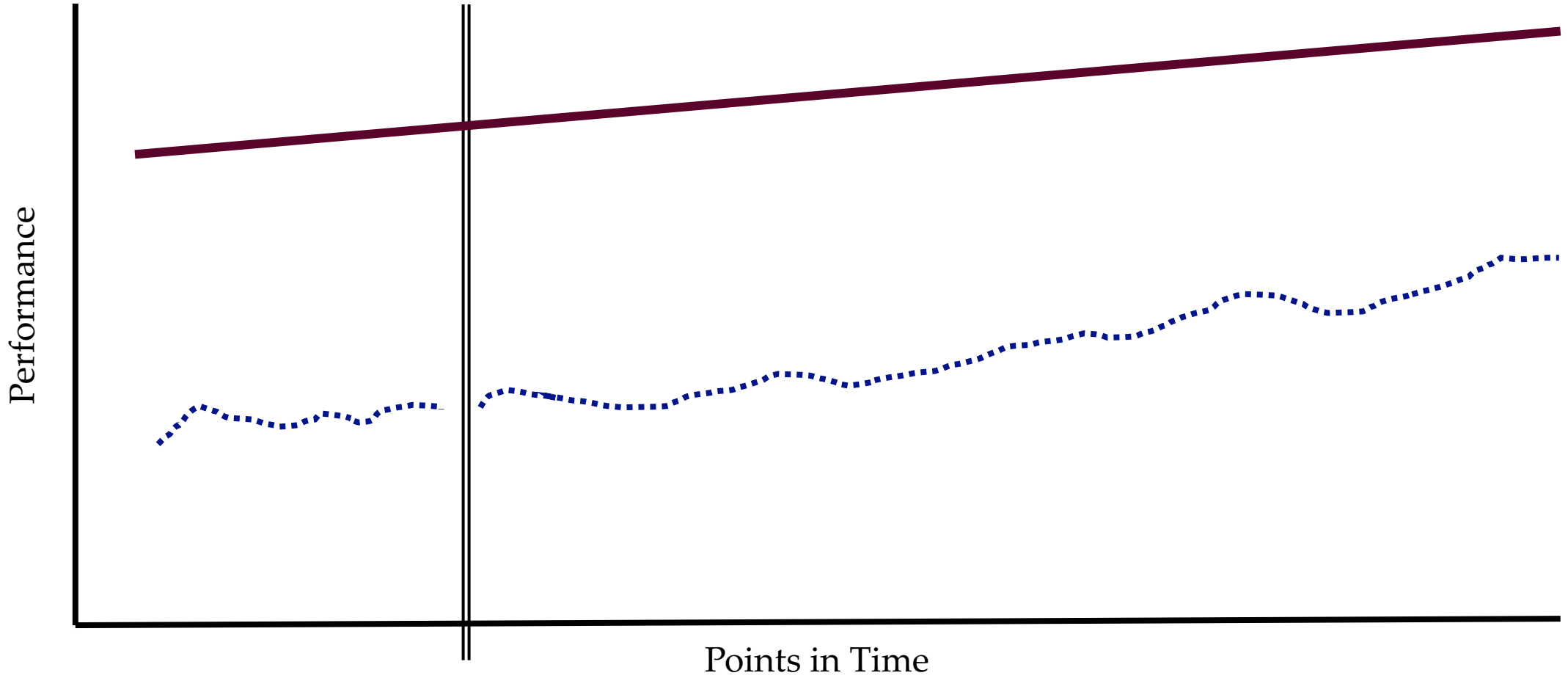

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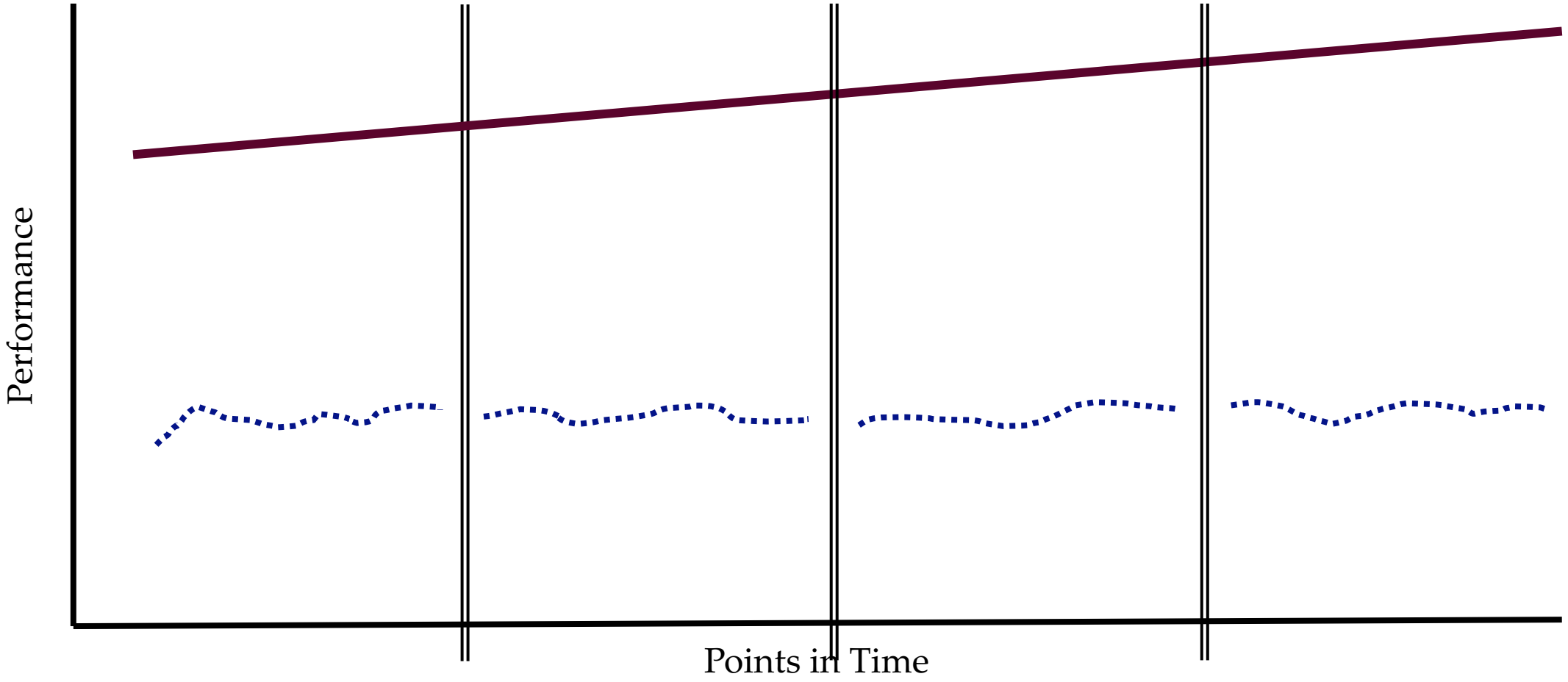
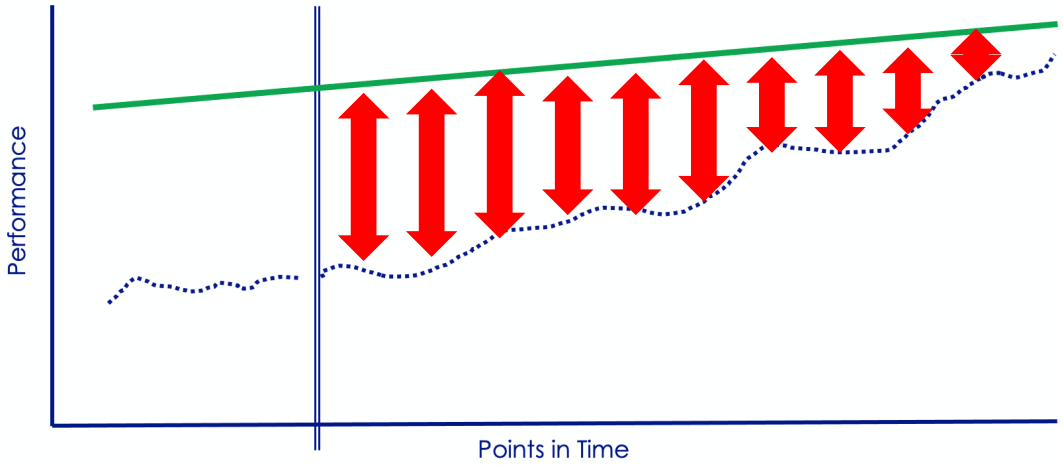
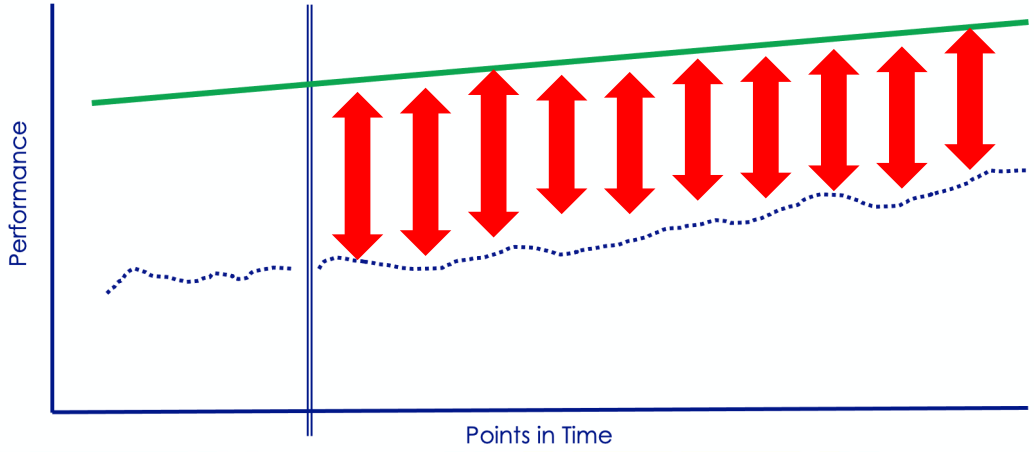
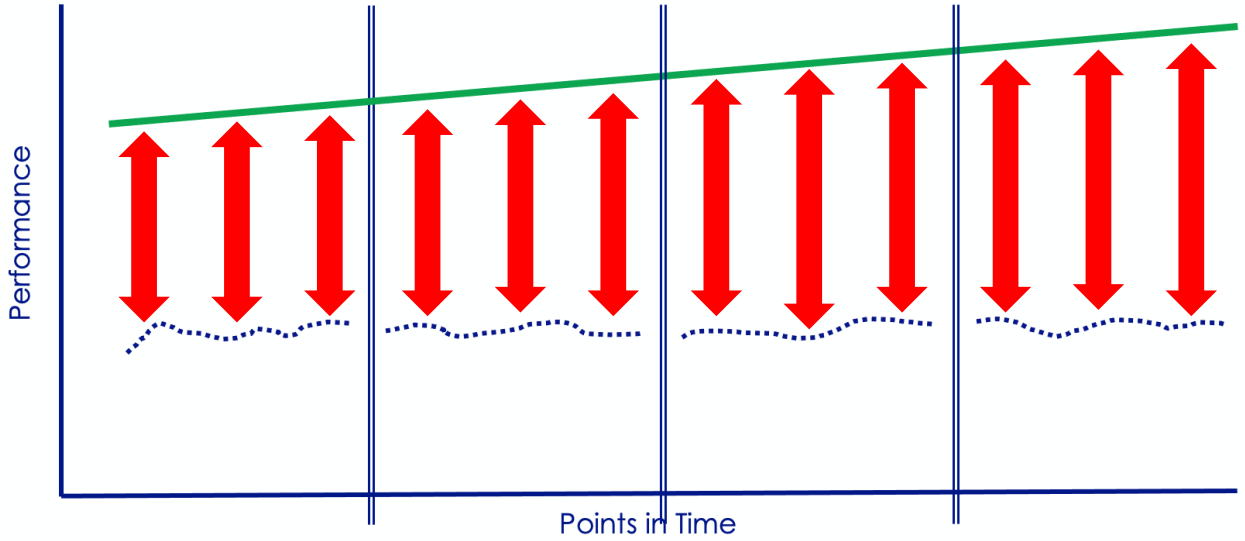


What's the Impact on the Student?

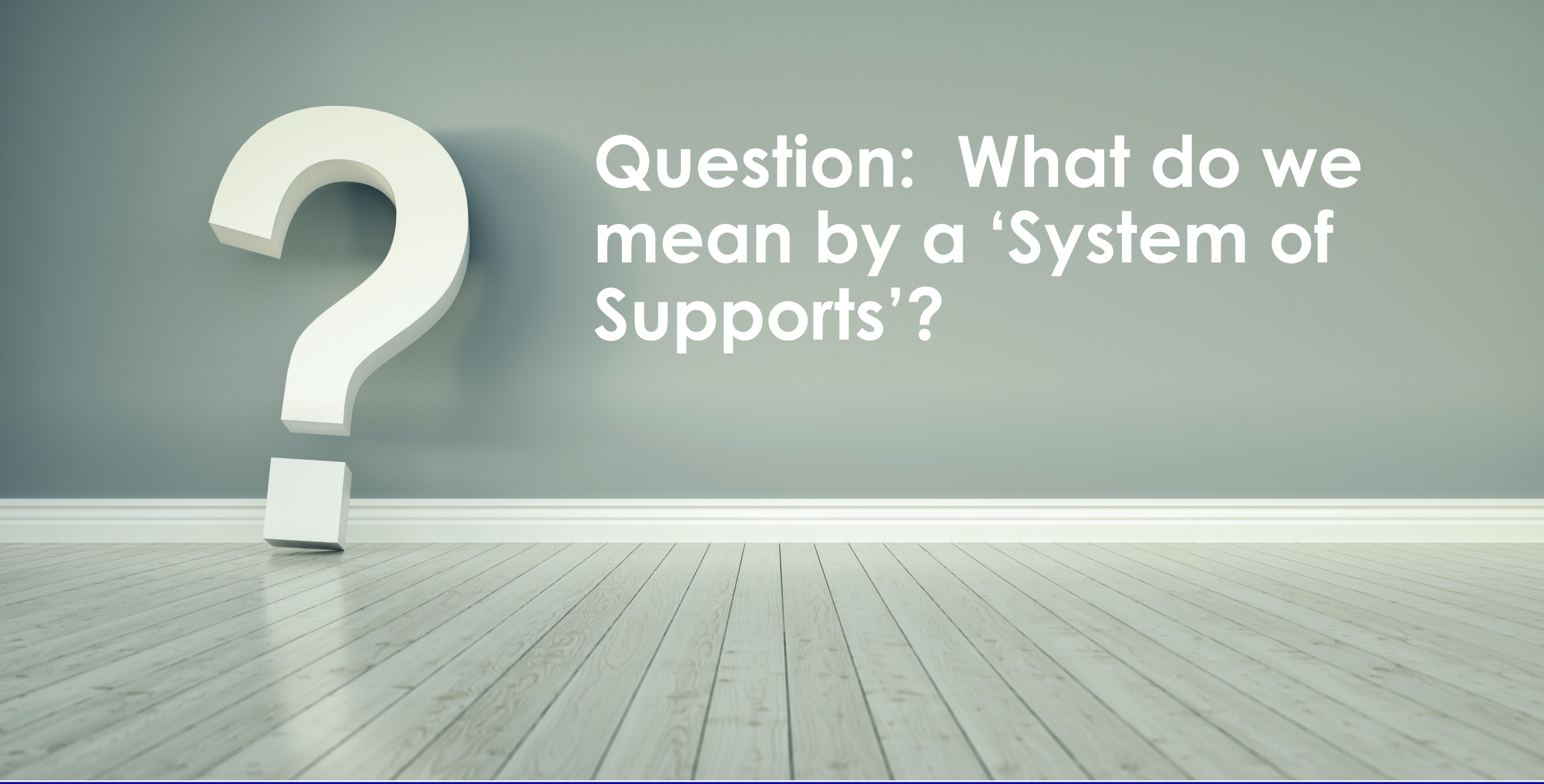






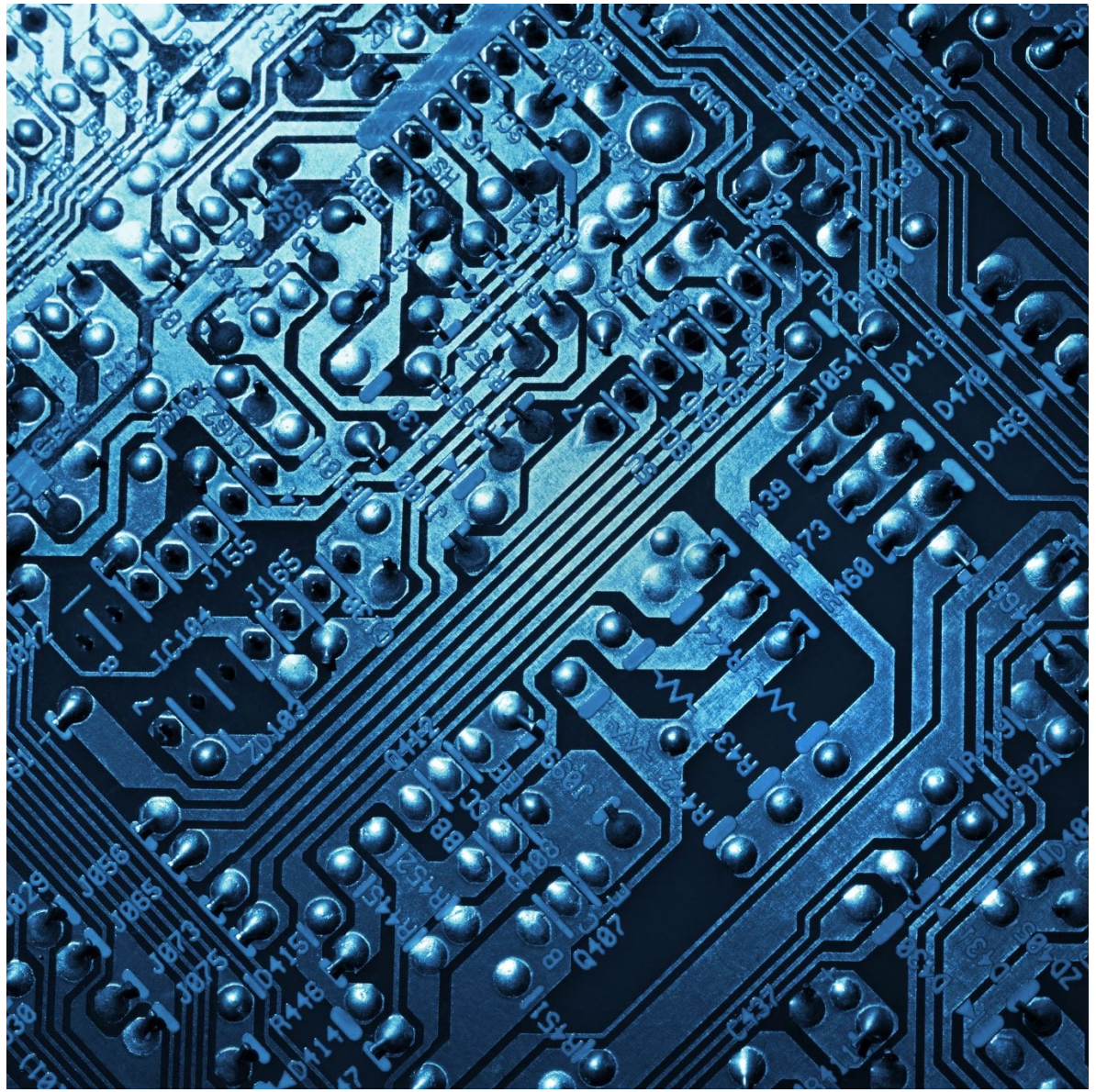
Lack of Meaningful Engagement with the Curriculum Leads to

- Learning Loss
- Self-Esteem Issues
- Behavioral Issues
- Increased Dropout Rates
- Overall Poor Student Outcomes



Question: What do we mean by a ‘System of Supports’?

Let's Talk About Technology



Technologies Used in Schools

Educational or Instructional Technologies	Productivity or Informational Technologies	Assistive Technologies

• **Strategy for Use**: Provides learning experiences to enhance or support student's progress in curriculum.
• **Examples**
  • Read 180
  • IXL
  • Oregon Trail
	• **Strategy for Use**: Consume and organize information or produce content.
	• **Examples**
	  • MS Office
	  • Google Suite
	  • Browsers
		• **Strategy for Use**: Provides a means to allow students with disabilities to do tasks they could not otherwise do.
		• **Examples**
		  • Communication Devices
		  • Mobility Aids
		  • Text to Speech
		  • Speech Recognition

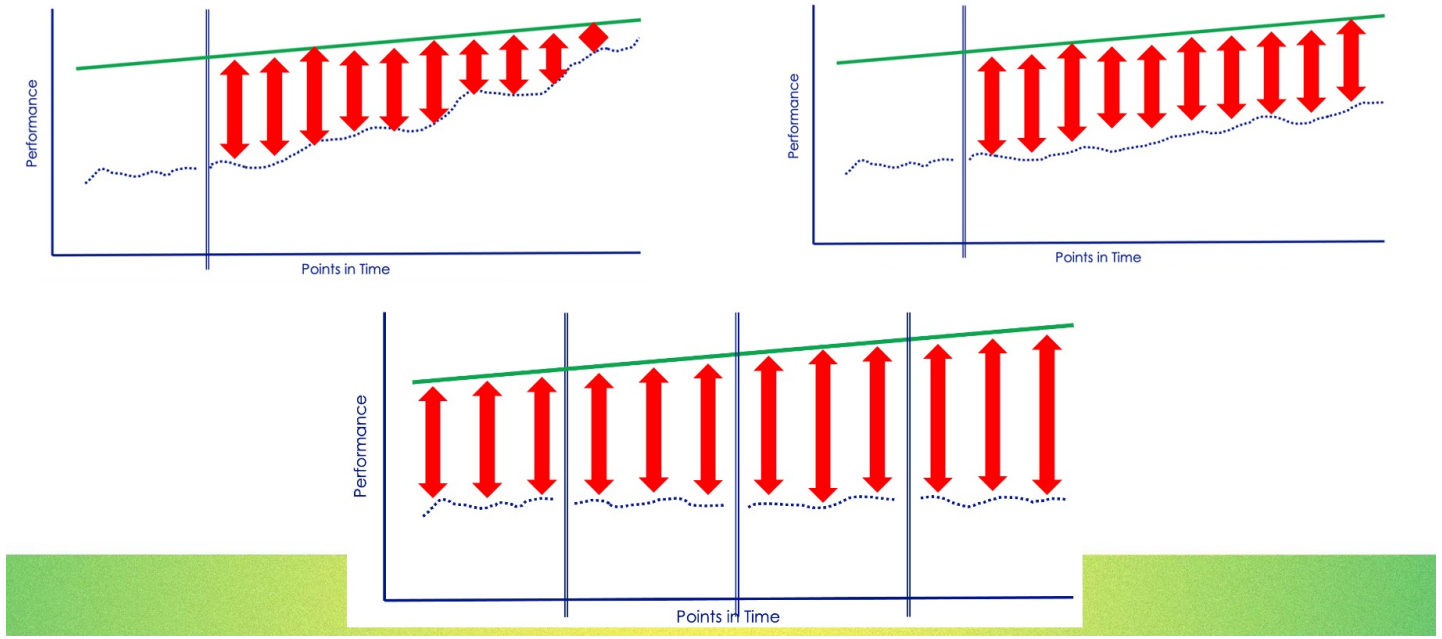
CITES, 2021

But, these don't fully address the issues…

Educational or Instructional Technologies

Productivity or Informational Technologies

Assistive Technologies



We need another type of technology to move the needle…

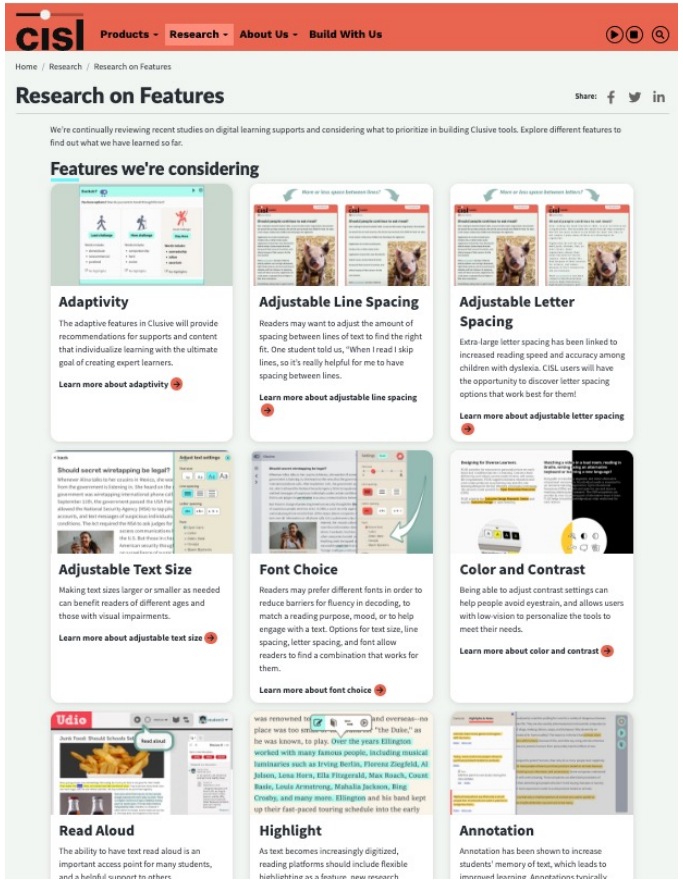
Supportive Technologies

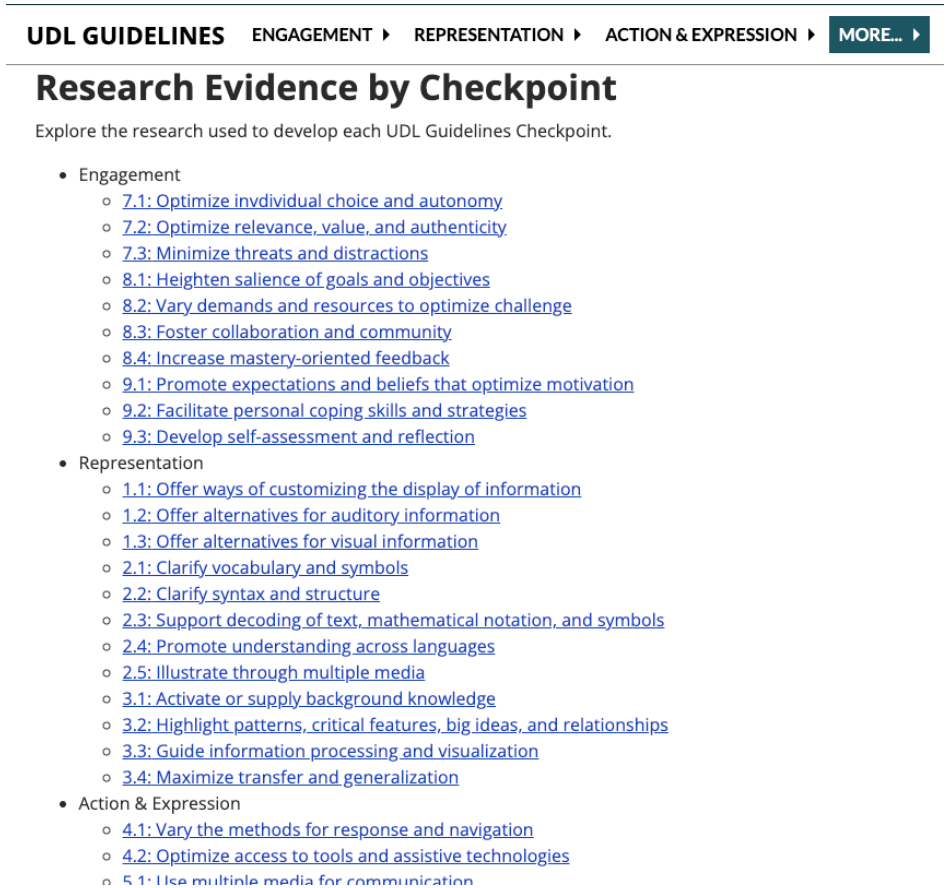
- Decreases Barriers to the Curriculum
- Compensate for Difficulties Currently Faced by Students
- Available to All Students
- Flexibly Used Based on Student Needs

Some Potential Features of Supportive Technologies

Adjustable Line Spacing	Adjustable Letter Spacing	Adjustable Text Size	Adjustable Font Size	Adjustable Color and Contrast	Text to Speech
Adjustable Highlighting	Annotation Capabilities	On-Demand glossary	Embedded Comprehension Checks	Text Simplification	Text Leveling
Speech to Text	Word Prediction	Zoom	Navigation Supports	Bookmarking	Captions
Abbreviation Expansion	Math Syntax Editor	Alternative Access			

Research Base for Potential Features

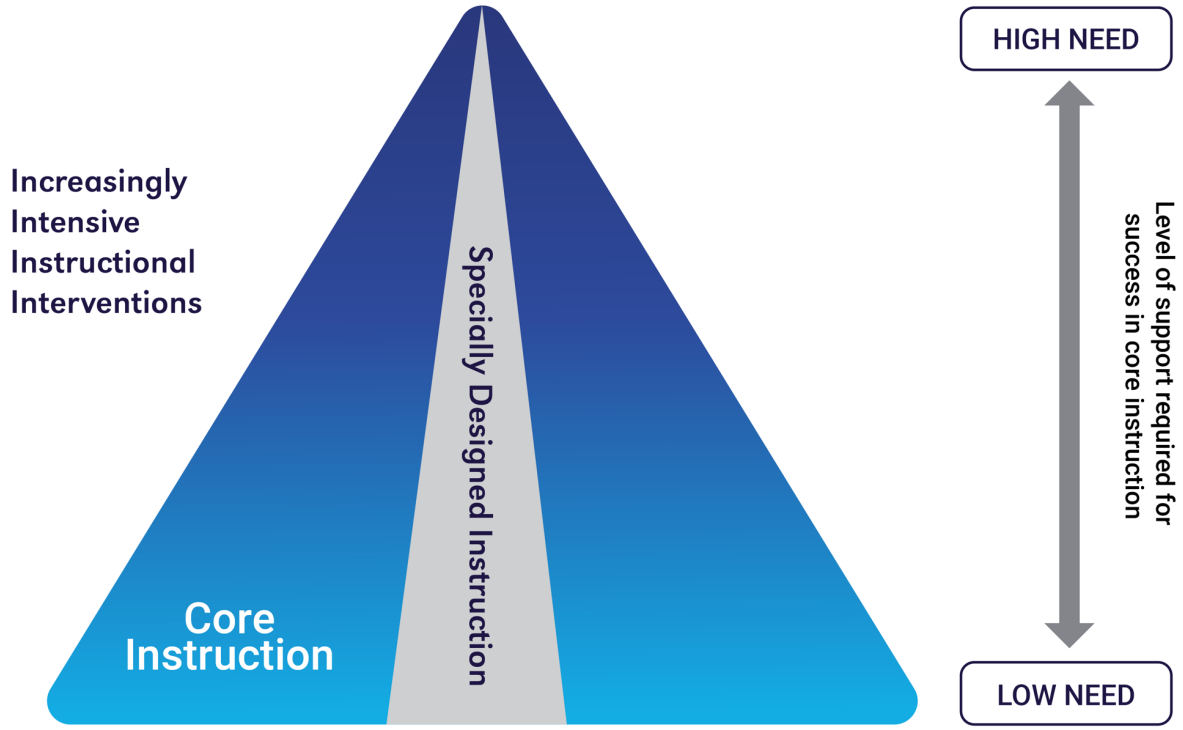




https://cisl.cast.org/research/features https://udlguidelines.cast.org/more/research-evidence

Let's Talk about Supportive Technologies and MTSS

A Conceptual Framework for NeMTSS

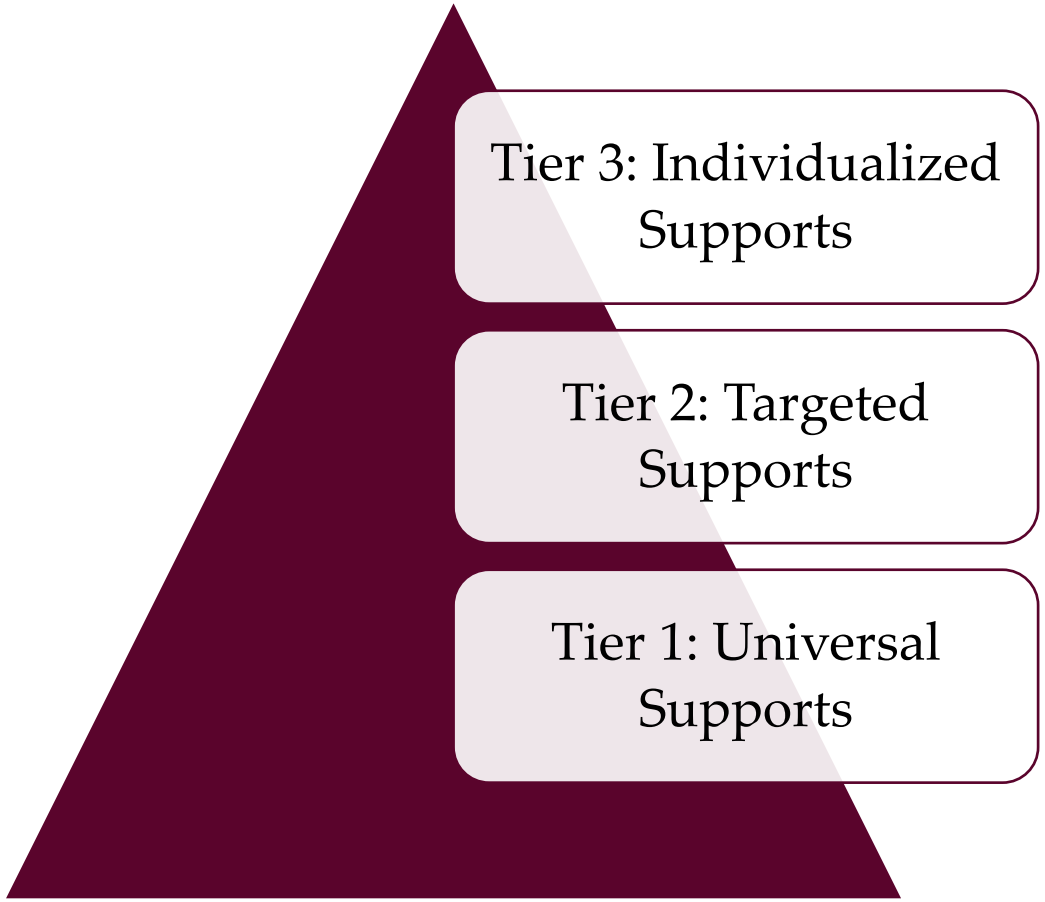


NeMTSS FRAMEWORK

Students may receive services in all areas of the pyramid at any one point in time.

Adapted from the U.S. Department of Education

Supportive Technologies within an MTSS Framework



- Intensity (Frequency) of Use
  - Incidental Use
  - More Frequent Use
  - Consistent Use
- Increased Individualization of Tools and Features
  - Widely Deployed Generic Supports
  - More Robust Targeted Supports
  - Individualized and/or Adapted Supports

Universal Reading Supports

- Built-In /Widely Deployed Tools for
  - Magnification
  - Text to Speech
  - Highlighting
  - Contrast
  - Text Levelling
  - Glossary/Thesaurus

Targeted Reading Supports

- Targeted Deployment of Tools
- More Robust Features and Options (e.g., better text to speech, better text simplification/text levelling)
- Additional Features (e.g., annotation, bookmarking, comprehension checks)

Individualized Reading Supports

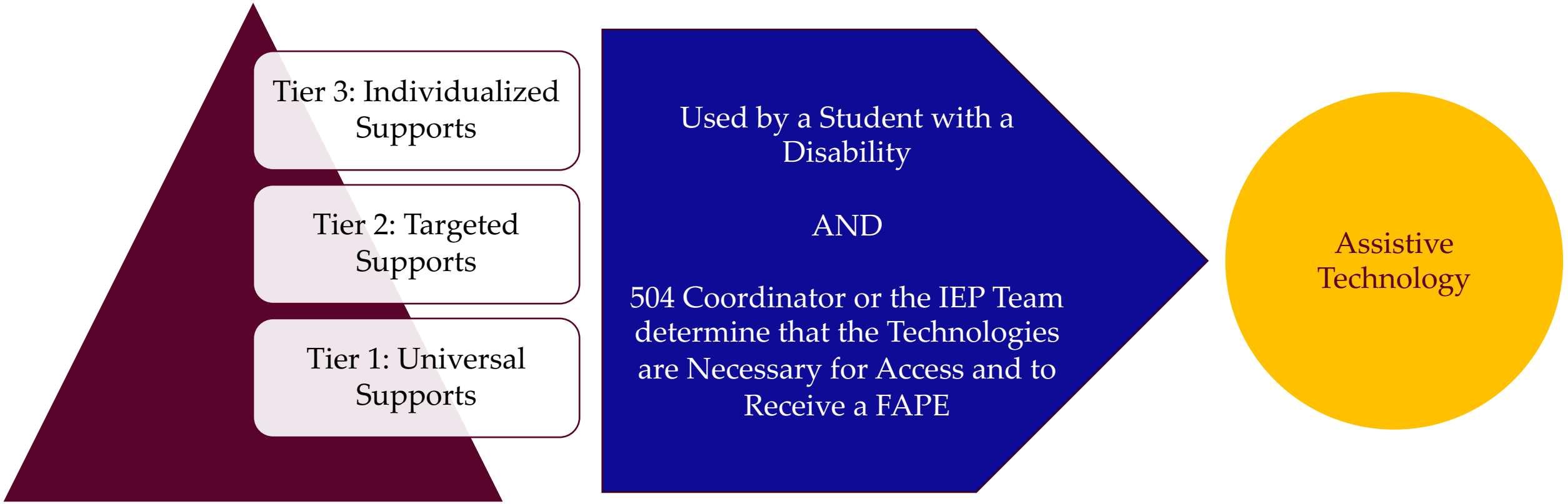
- Deployed to Individual Students
- Specific Features Based on Student's Individual Needs

How do Supportive Technologies and Assistive Technologies Relate?

Assistive Technologies

- **Strategy for Use**: Provides a means to allow students with disabilities to do tasks they could not otherwise do.
- **Examples**
  - Communication Devices
  - Mobility Aids
  - Text to Speech
  - Speech Recognition

How do Supportive Technologies and Assistive Technologies Relate?



However, supportive technologies do not work unless they are embedded in good practices…

Practices for Supportive Technologies

Shared Leadership and Planning

Robust Professional Development

Build Fidelity of Practices

Engage in Data Informed Decisions

Start with High Quality and Accessibility Materials

- Accessibility creates a foundation for engaging in learning.
- Inaccessible materials create barriers between the student and learning.
- Supportive Technologies interface with accessible materials to allow students to access learning.

NEBRASKA INSTRUCTIONAL MATERIALS COLLABORATIVE

National Center on Accessible Educational Materials

How to Start with Accessibility

Acquire Accessible Materials

- Purchase Accessible From the Beginning
- Choose Materials Based on Accessibility

Create Accessible Materials

- Create Materials Following Accessibility Principles

Use Accessible Materials

- Use Supportive Technologies to Interface with and Support Individual Student Needs

Focus on Key Technologies for Universal and Targeted Support Technologies

- Build a team to focus on building a structure for support technologies
  - What are the current systems used in school?
  - What are the built-in support features and are they available for use?
  - What are the widely deployed support technologies?
  - What support technologies may need to be added?.

Robust Professional Development

Build Knowledge and Skills in Using Support Technologies

Build Fidelity of Practices

Create Expert Learners

- Expert Learners
  - Plan, Monitor, and Reflect on their Learning
  - Leverage Multiple Tools to Support Their Learning
    - Contextually Choose Tools
  - Abandon Strategies that are Ineffective

Teachers need to scaffold and support the use of supportive technologies to facilitate the development of expert learners

Engage in Data Informed Decisions

Using Data for Decision Making

- Deciding Supports for Students
  - Example Tools
    - uPar
    - DeCoste Writing Protocol
- Assessment and Progress Monitoring
  - Backend Dashboards and Data Systems
    - Snap and Read
    - CoWriter Universal
    - Texthelp Read and Write
    - Equatio

Questions?

NeMTSS FRAMEWORK

NEBRASKA DEPARTMENT OF EDUCATION

2022 NeMTSS SUMMIT

CREATING COHERENCE

October 13-14, 2022

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Scan the QR code to complete a brief evaluation after each session throughout the summit.