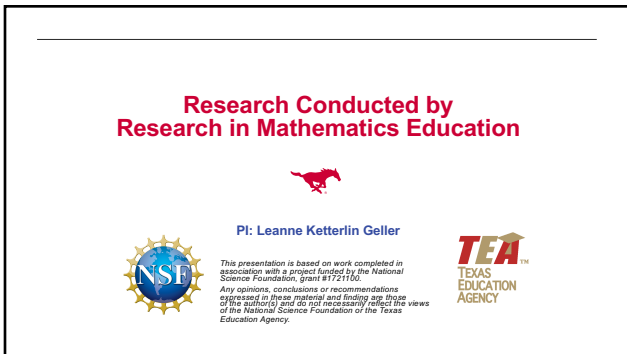
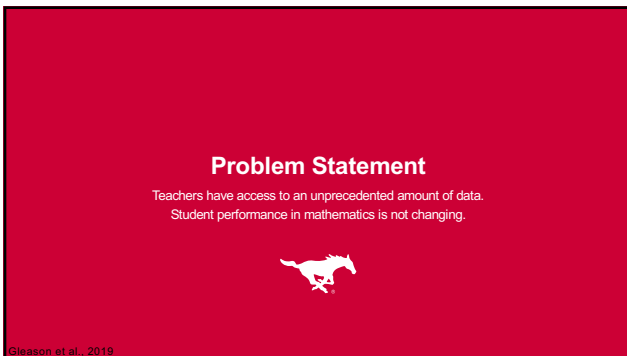




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U.S. Department of Education
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Evaluation of Support for Using Student Data to Inform Teachers' Instruction

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- Data-related activities did not increase
- Teachers' use of data for changing their instructional practices did not increase
- Student achievement did not improve

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Value Proposition

Learning progression-based classroom assessment practices can uniquely support teachers' decision making thereby improving students' mathematics outcomes.



Ketterlin-Geller et al., 2019

5

Goals for today...

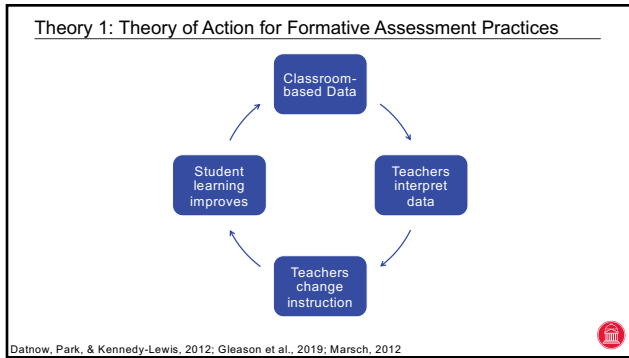
What theories underlie this value proposition?

What assumptions do these theories impose?

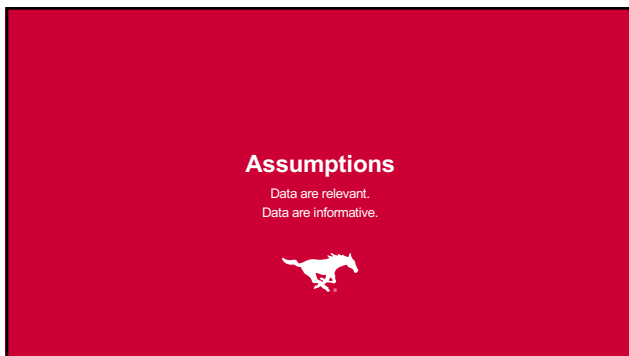
What evidence is available to examine these assumptions?

What evidence are we missing?

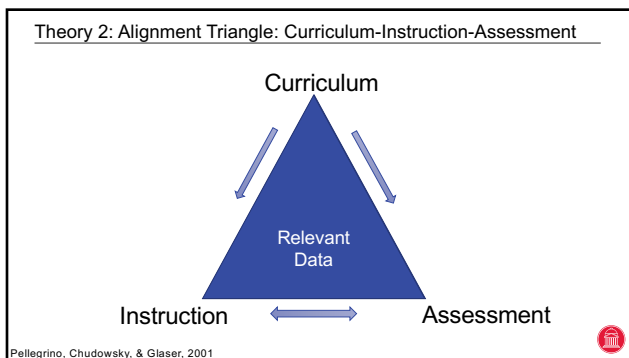
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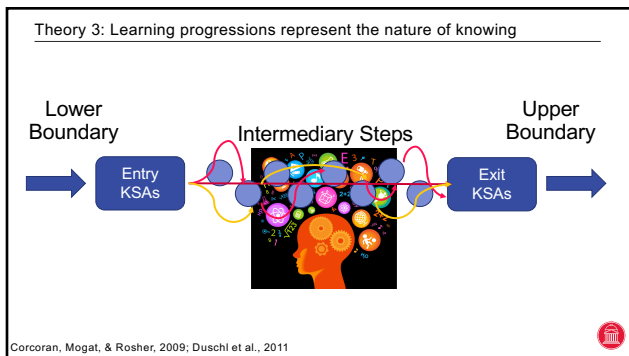
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Assumptions

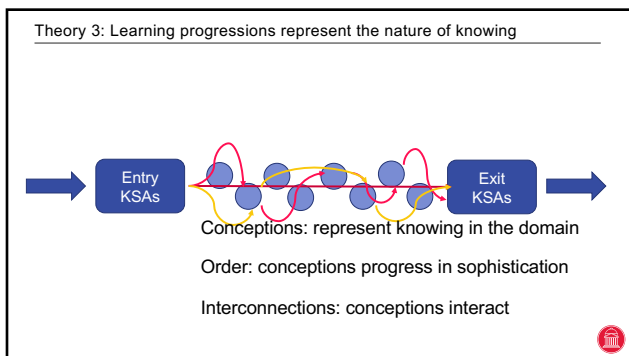
Curriculum, instruction, and assessment are based on theories of learning.
Theories of learning represent knowing in the domain and have a structure that is informative.



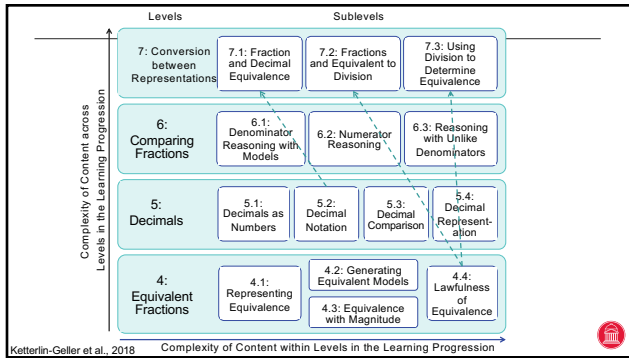
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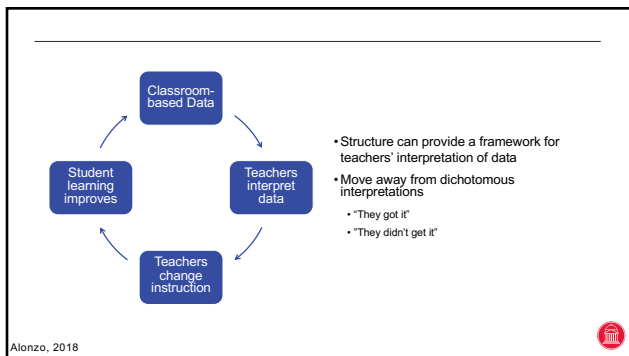
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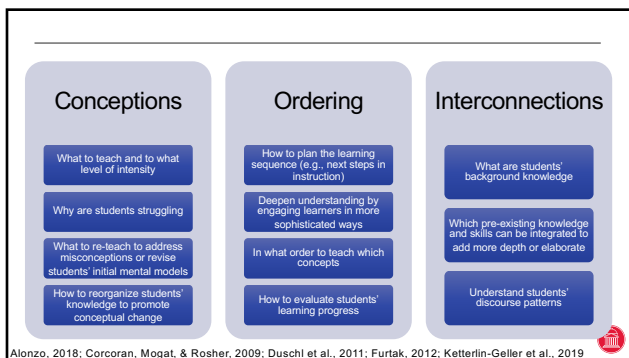
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Assumption

Learning progressions are based on theoretical and empirical evidence.

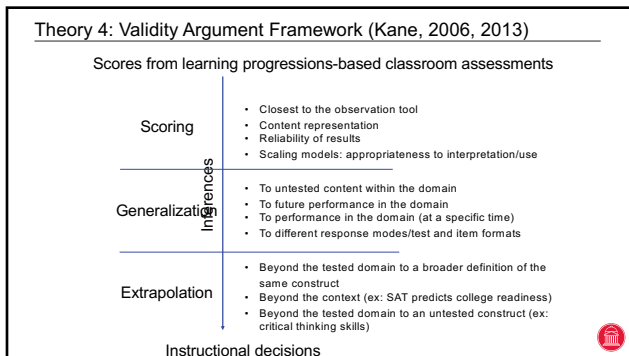


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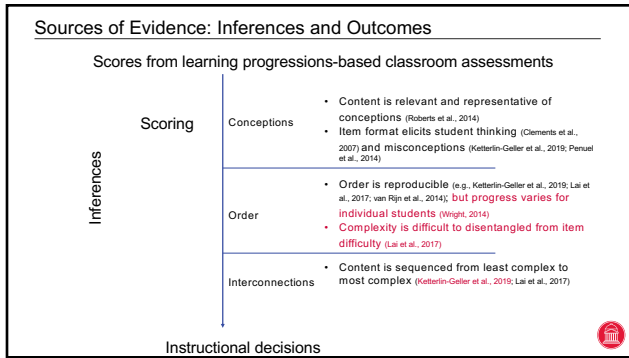
Preliminary Review of Evidence

		Emphasis on ordering	
Intertwined with assessment	Conceptions	Ordering	Interconnections
	Cognitive Interviews	Penueel et al (2014); Stevens et al (2010)	Stevens et al (2010)
	Case Studies, Teaching Experiments, Design Studies	Duschl et al (2011); Wright (2014)	Blanton et al (2015)
	Think alouds	Gotwals & Songer (2013); Penueel et al (2014); Wilmont et al (2011)	Ketterlin-Geller et al (2013); Lai et al (2017)
	Psychometric analyses	Bradshaw & Templin (2014); Ketterlin-Geller et al (2019)	Gotwals & Songer (2013); Ketterlin-Geller et al (2013, 2019); Lai et al (2017); Penueel et al (2014); Osborne et al (2016); Szilagyi et al (2013); van Rijn et al (2014); Wilmont et al (2011); Yao & Gue (2016)
	Response processes	Lai et al (2017); van Rijn et al (2014)	

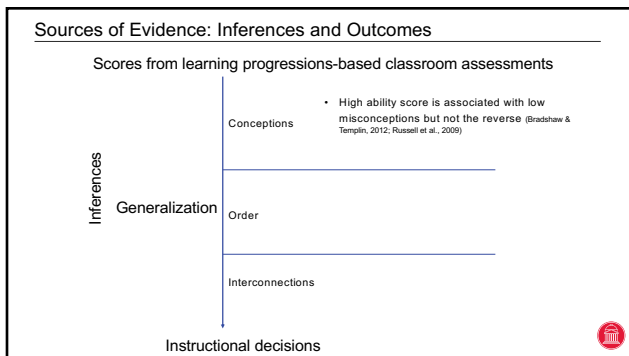
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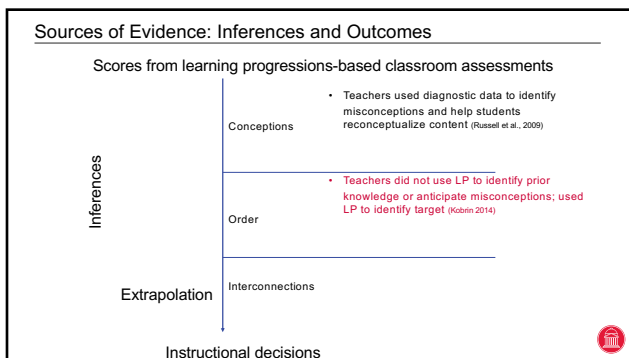
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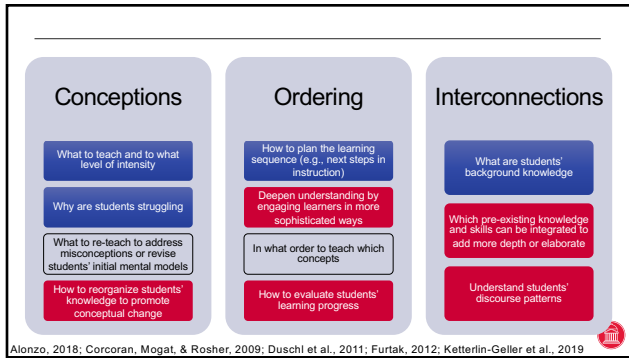
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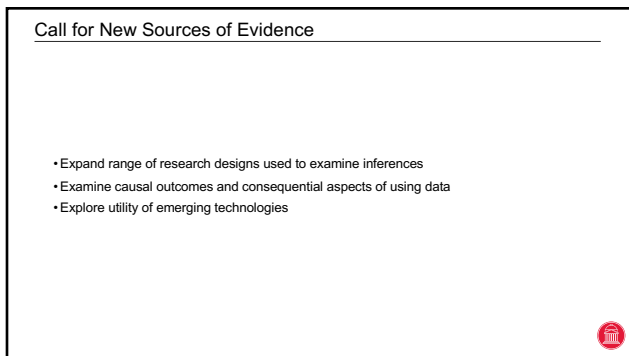
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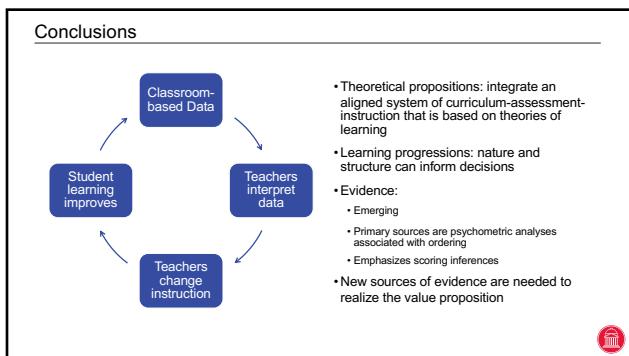
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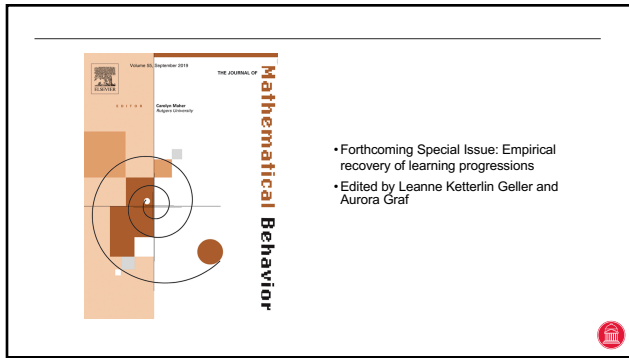
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