

# Epistemology and Learning by Doing: How and Why Civic Engagement Facilitates Durable Learning

Empowering Students to Learn -- 2015



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# Problem: Low Graduation Rates

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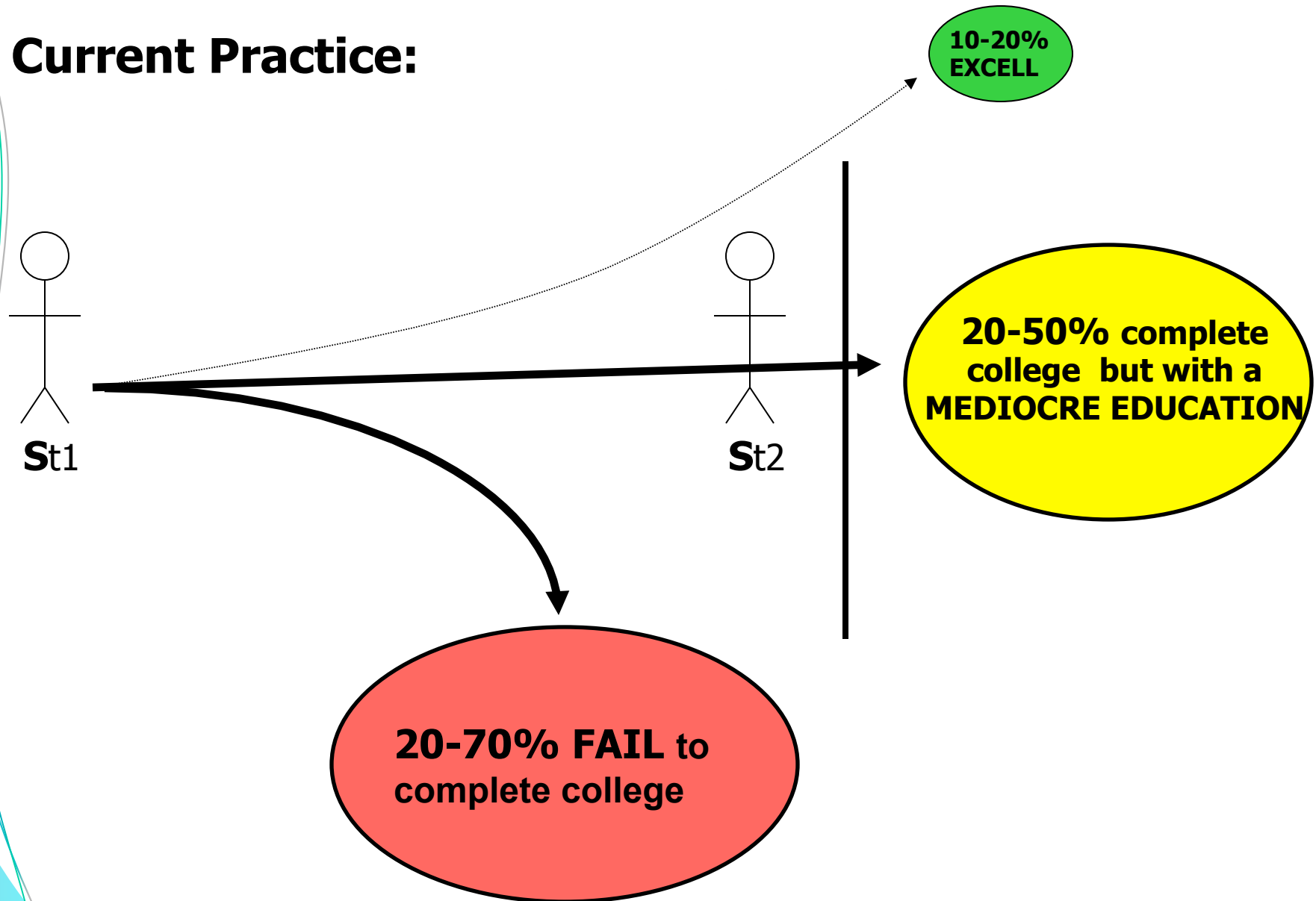
This number has changed very little over the last 40+ years.

# Apparent Cause:

- ② **PASSIVE LEARNING** (an oxymoron)
- ② Students' existing (high school) learning *habits* aim at low-level thinking skills and passive, dependent learning.
- ② In college those learning habits don't work well.
- ② Consequent motivation and engagement problems further erode students' confidence, academic performance—and learning.
- ② Poor learning skills severely limits their potential for success in college—and in 21<sup>st</sup> century life.

# Problem: Passive Learning

## Current Practice:



# Root Cause: Our Focus on Teaching

- We don't teach students *how to learn*.
- We have learned a lot about how people learn over the past 15 years.
  - Why don't we use what we've learned to improve our students' learning?
  - Epistemological gap

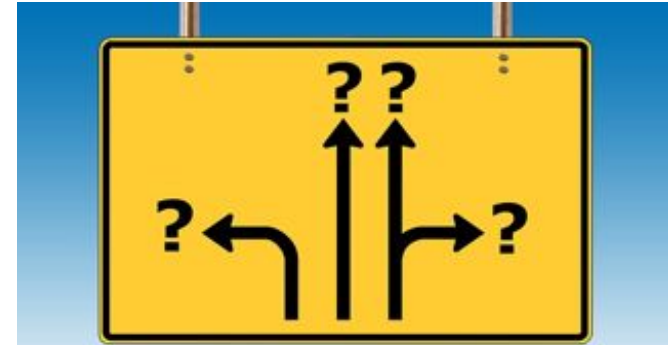
# Your Goals

What are your goals as a teacher?  
(Jot down 2-3 of your most  
important goals.)

# Epistemology of Learning

What is learning?

- What does it mean to learn something?
- How can you tell when you've learned something?





# Learning is...

- ② Greater Understanding (50-70%)
- ② Skill Acquisition (25-35%)
- ② Total  $\approx$  90% (Theory-in-use)

These are lower-order thinking skills  
on Bloom's taxonomy

# Learning is...

- ② Affective change (5-15%)
- ② Habit formation/integration (>5%)

Espoused Theory

# Epistemology of Learning

How we define *learning*

- shapes how students learn more than how we define teaching or our course goals
- because it defines how we *assess* learning.



# Epistemology of Learning

Our existing epistemologies of learning lead to cramming and forgetting—and failure (surface approach).

Facilitating *durable learning* depends on changing students' **attitudes** and forming new **habits**. (You only keep what you value and use regularly.)

# Learning is Forming New Habits

- ② Fueled by attitudes and desires (emotion)
- ② Supported by skills and understanding





TEACH*ing*

≠ LEARN*ing*

# Civic Engagement as Alignment

- ④ Civic engagement pedagogies depend on experiential learning (learning by doing)
  - Students are exposed to multiple modes of teaching
  - Those multiple modes are explicitly theorized as teaching, requiring students to adopt multiple, independent and active learning strategies (leading to durable learning).
  - Experiential learning directly promotes **affective engagement** and **habit formation**, also leading to durable learning
- ④ Epistemologies of civic engagement count that engagement and habit formation as learning.

# Civic Engagement as Alignment

- ② Civic engagement pedagogies require teachers to relinquish considerable control of the teaching/learning experience.
- ② Therefore, in civic engagement pedagogies **assessment of learning** *cannot* focus solely (or even mostly) on knowledge and skills (epistemology of teaching)...
- ② Rather, assessment of learning focuses on **engagement** and **habit formation**, aligning the epistemology of teaching with the epistemology of learning.



# MetaLearning:

## 6 Steps to Changing Learning Habits

1. Help students *discover self-motivations* for learning
2. *Align their definitions of learning* with ours
3. Teach students *how learning works* and derive guiding principles
4. Derive *strategies and tactics* from principles
5. Develop effective learning *practices*
6. *Maintain* those habits

# Sustaining Students' Motivation

## @Building curiosity

- Teaching students to ask their own questions
- [http://hepg.org/hel-home/issues/27\\_5/helarticle/teaching-students-to-ask-their-own-questions\\_507](http://hepg.org/hel-home/issues/27_5/helarticle/teaching-students-to-ask-their-own-questions_507)

# Sustaining Students' Motivation

## @ Teaching Resilience and Perseverance

- The effect of praise on mindset:

[https://www.youtube.com/watch?v=TTXrV0\\_3UjY](https://www.youtube.com/watch?v=TTXrV0_3UjY)

- Carol Dweck on growth mindset:

<https://www.youtube.com/watch?v=ICILzbB10bg> (Links to an external site.)

- The power of “yet”:

<http://www.youtube.com/watch?v=ZyAde4nIIm8> (Links to an external site.)

- Angela Duckworth on grit:

<https://www.youtube.com/watch?v=H14bBuluwB8> (Links to an external site.)



# Sustaining *Your* Motivation

What Teachers Make