Sherrerd Faculty Teaching Mentor

Conversation

- Worthwhile

- Limited opportunities to have them

A kind of shop talk

- Different venues and forms
- For all career levels
- Topic is open-ended
- Confidential

Is anyone interested?

Learning Science Framework

- Questions and things to think about that emerge from this perspective.

- Belief — best tools a teacher can have are ideas.

Why a framework?

- ## Teaching is complex system

"And here is a simple truth about teaching... Teaching is a system. It is not a loose mixture of individual features thrown together by the teacher. It works more like a machine, with the parts operating together and reinforcing one another. This is a very different way to think about teaching. It means that individual features, by themselves, are not good or bad. Their value depends on how they connect to others and fit into the lesson." Stigler, James & Hiebert, James. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom.* New York, NY: The Free Press.

- ## Operating intelligently within a complex system requires organized knowledge

Other contributions of a framework

- Support discourse
- Raise questions & decision points
- Support the kind of (on the ground) improvisation - that is at the heart of good teaching

Begin

Present a learning science perspective on teaching and learning

Conclude

Pose a few sample questions that the framework might raise about teaching practices
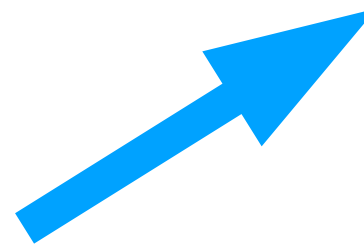
The teaching / learning process from 5,000 feet

Teaching   &   Learning

Central concept for consideration — *Who?*
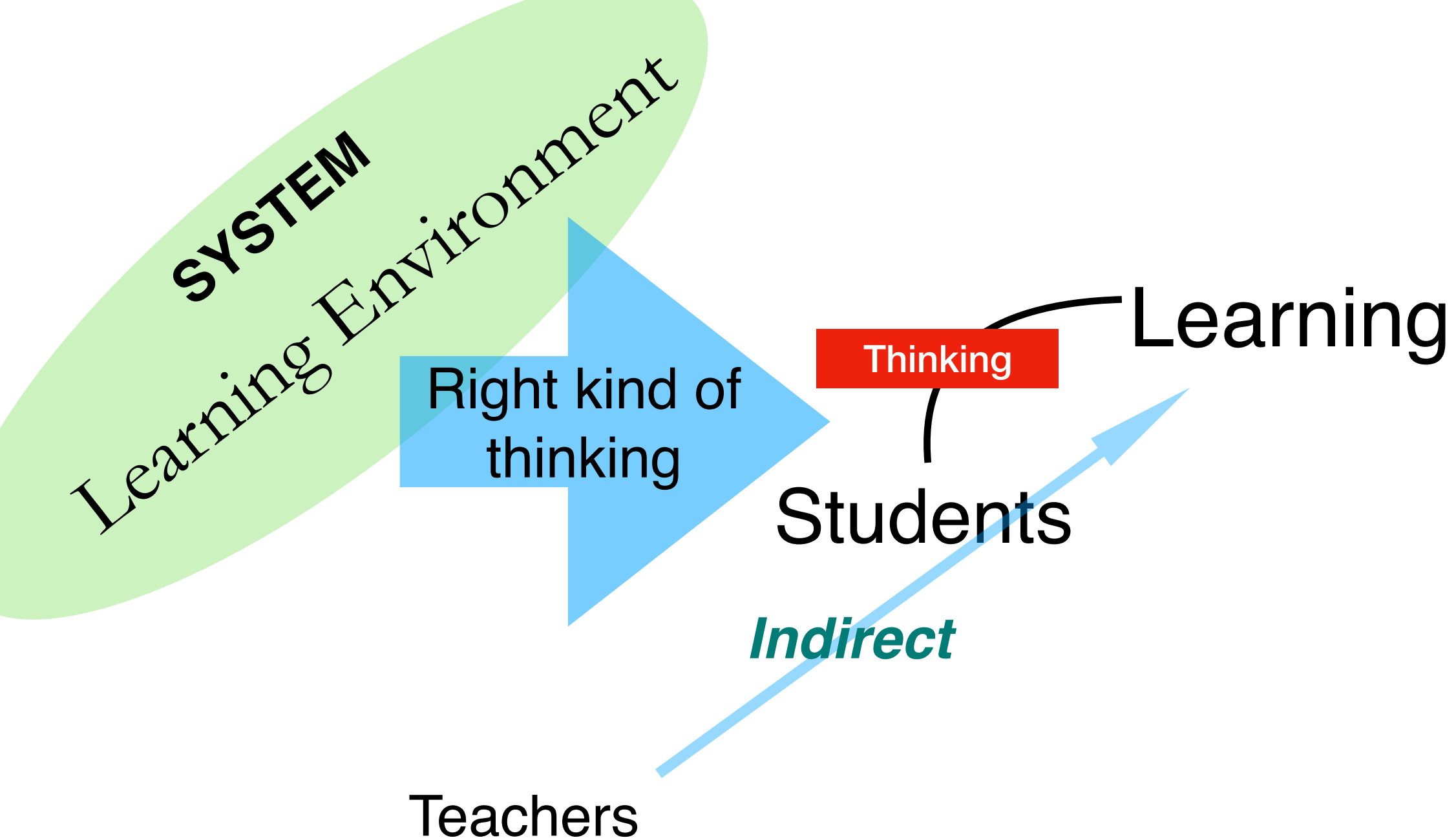
Thinking

Students

- *Active*
- *Constructive*
- *Social/cultural/historical*
  - All learning is mediated
  - Importance of discourse

SYSTEM

Learning Environment

Right kind of thinking

Thinking

Learning

Students

Indirect

Teachers

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Learning Environment

All there is to be learned

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Knowledge

Thinking

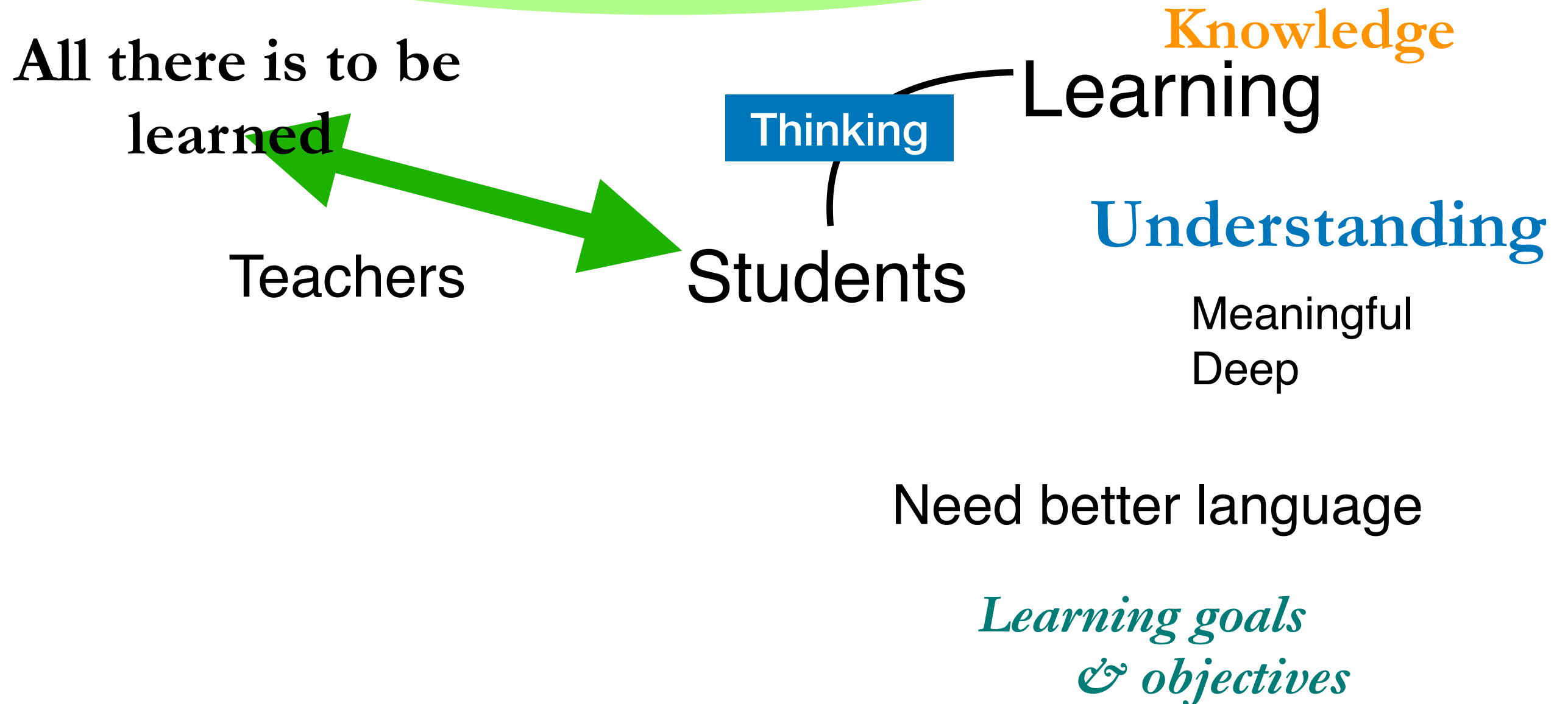Learning

Students

Teachers

How do we provoke and support active, constructive, social engagement ?

The "right" kind of thinking depends on the learning goals.
Our design decisions are guided by what we want learned.

Learning Environment

All there is to be learned

Knowledge

Thinking   Learning

Active

Understanding

Teachers   Students

Inclusion

Personality & Self Concept
Motivation & goals
Character
Values & Inclinations
Social / Historical / Cultural
Age / developmental level
Existing knowledge

Students' learning can neither begin nor "end" in the same place

Learning Environment

All there is to be learned

Teachers ⟷ Students

Knowledge

Learning

Thinking

Understanding

Assessment

Accountability

Importance of "*meta-discourse*"

Evidence

In planning for teaching in the classroom (or any other setting for that matter), you had better take into account the ideas about learning & teaching students already have. **(Jerome Bruner)**

Learning Environment

Knowledge

All there is to be learned

Thinking Learning

Understanding

Teachers Students

Evidence

- Texts
- Exams
- Homework
- Projects
- Questions
- Feedback
- Discussions
- Technology
- Physical space

Thinking

Adaptive
Flexible
Innovative
Creative

Tools

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Questions about Practice

Small groups in a larger class

Default: groups report out

- Why?
- (or better) Why not one group report out and build a discourse around that. Otherwise thinking may not advance beyond what the small group thought.

Questions about Practice

Lecture response technology

What makes a good "question"?
- create opportunities for discourse & interaction
- help identify knowledge gaps & misconceptions
- provide input for teacher improvisation
- spark interest and motivation

Questions about Practice

Integrating research into coursework

- Is purpose to learn about research? Better understand the content? Generate enthusiasm & interest? All of the above?
- What is the research question/problem?
- Where/who did it come from?
- Is the research work collaborative?
- What entering knowledge do students have about research? About the content?

Sherrerd Faculty Teaching Mentor

- Conversations about teaching & learning