

Confessions of a converted lecturer



International Conference on
Teaching and Learning in Higher Education
Melaka, Malaysia 21 November 2011



How do we learn?

Think of something you are good at — something that you know you do well.

How do we learn?

Think of something you are good at — something that you know you do well.

How did you become good at this?

How do we learn?

Became good at it by:

- 1. trial and error**
- 2. lectures**
- 3. practicing**
- 4. apprenticeship**
- 5. other**

How we teach...



Learning spaces



Learning spaces



Learning spaces

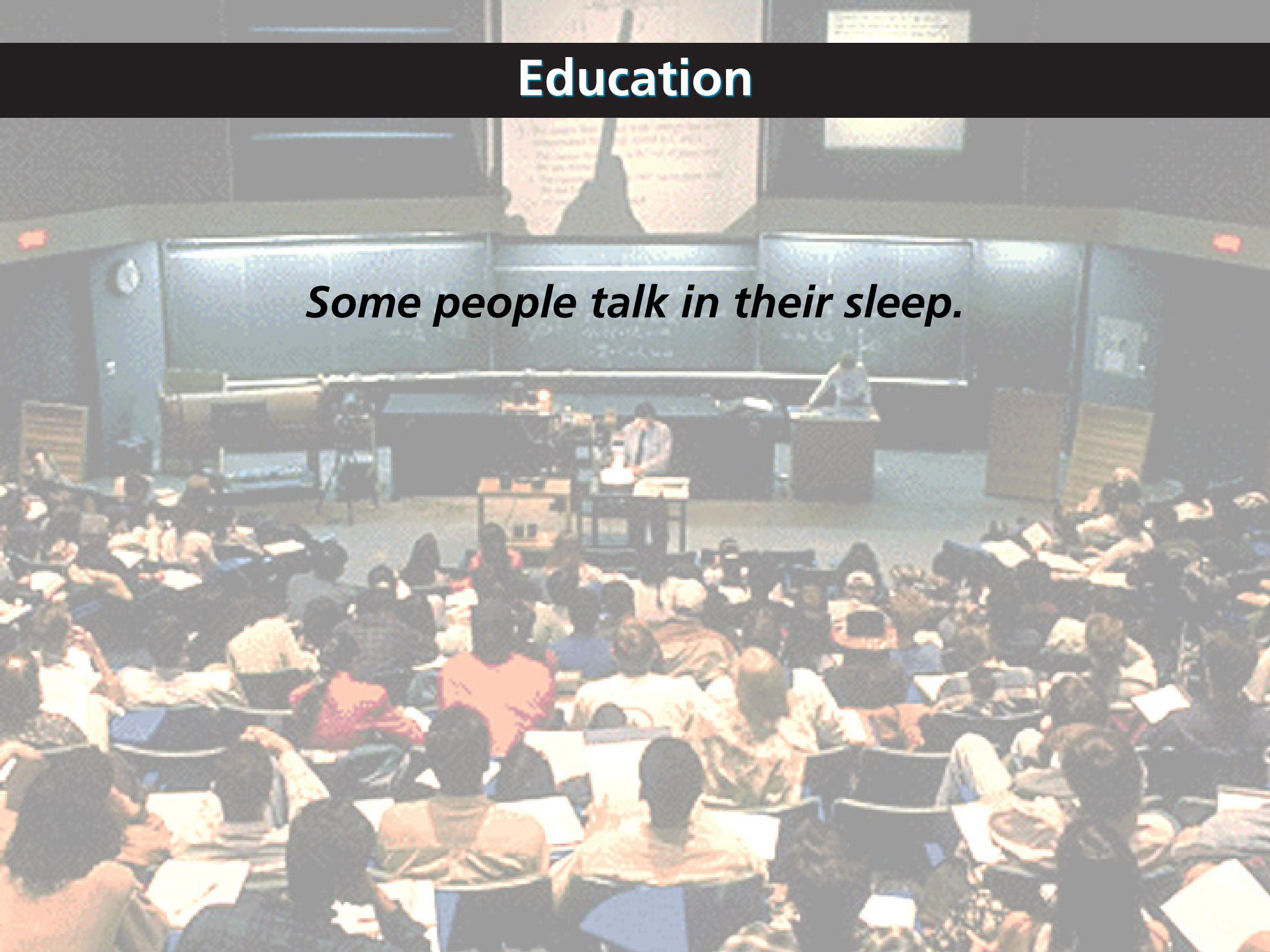


Education



Education

Some people talk in their sleep.

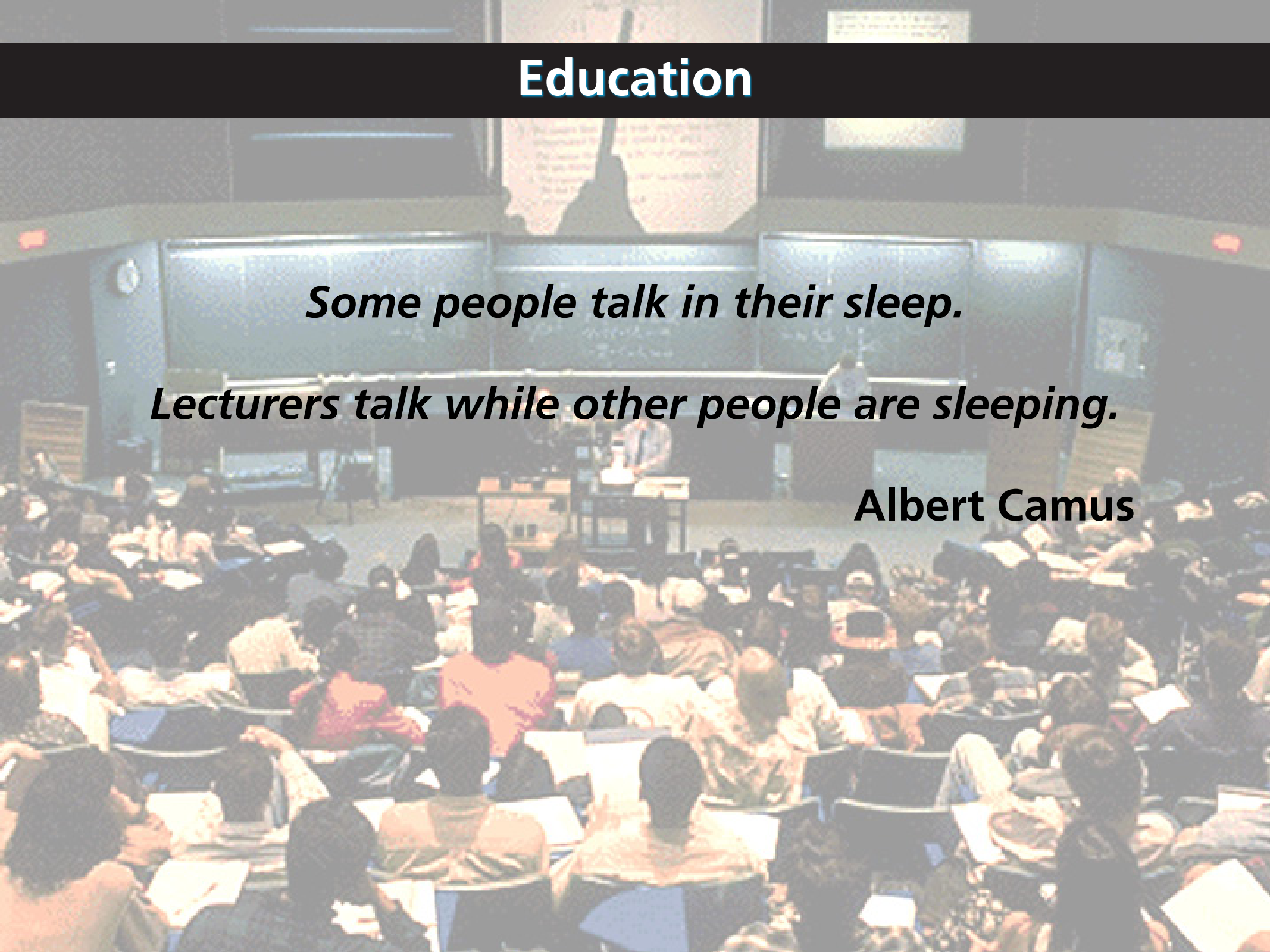


Education

Some people talk in their sleep.

Lecturers talk while other people are sleeping.

Albert Camus

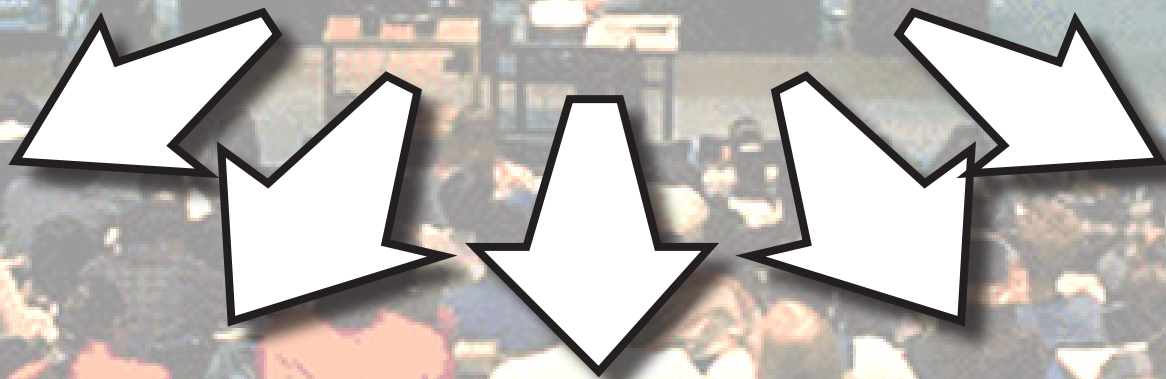


Education



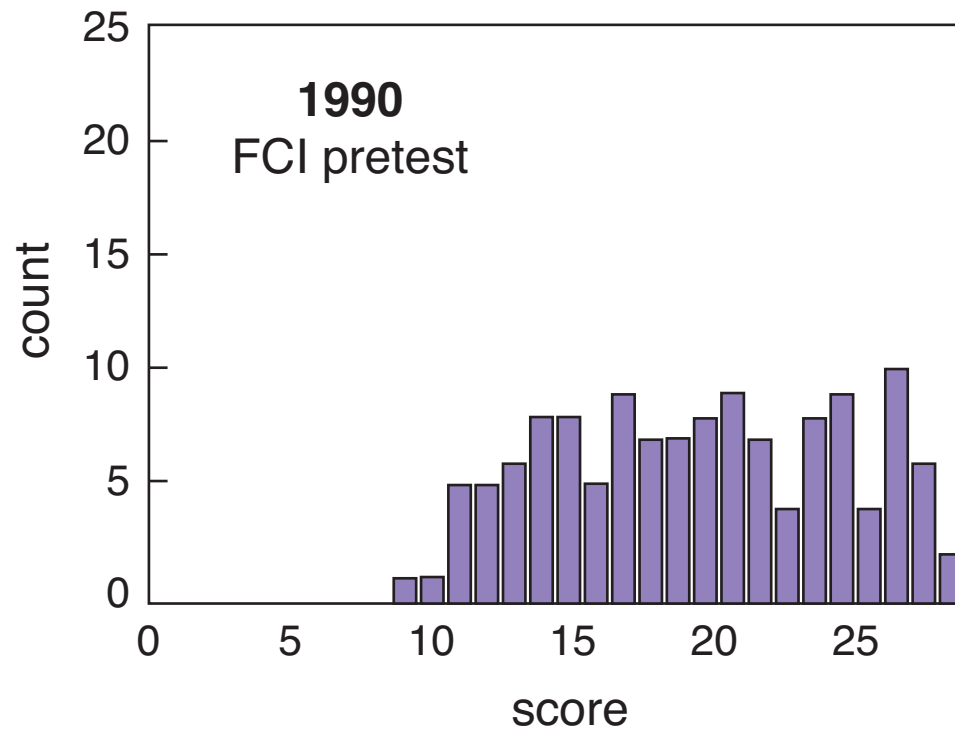
Education

lectures focus on information transfer...



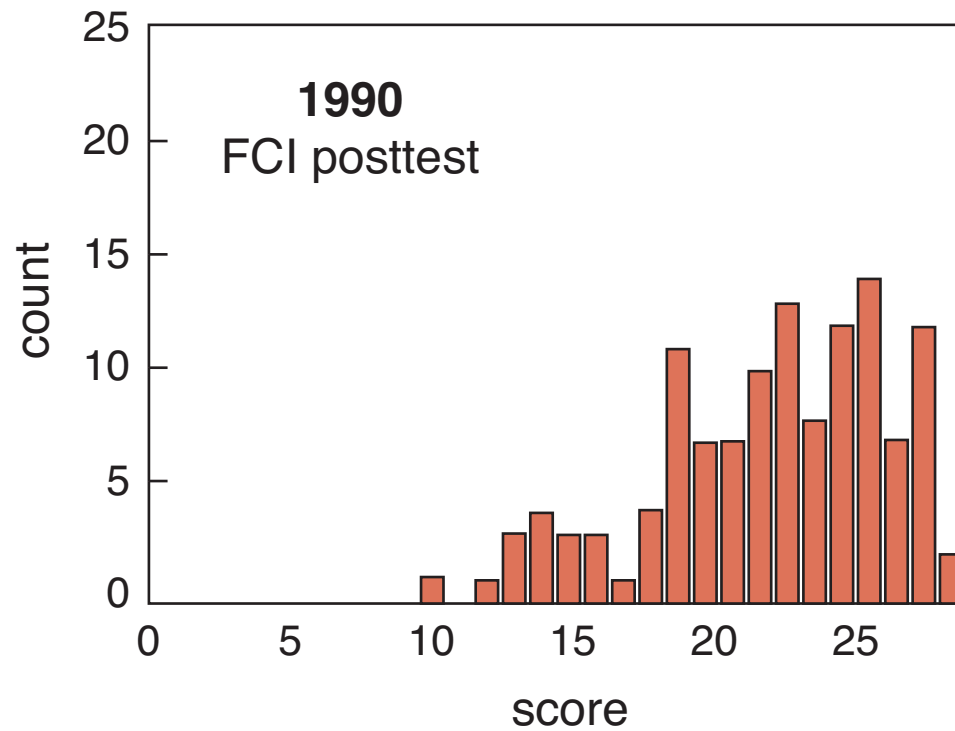
Education

education is not just information transfer



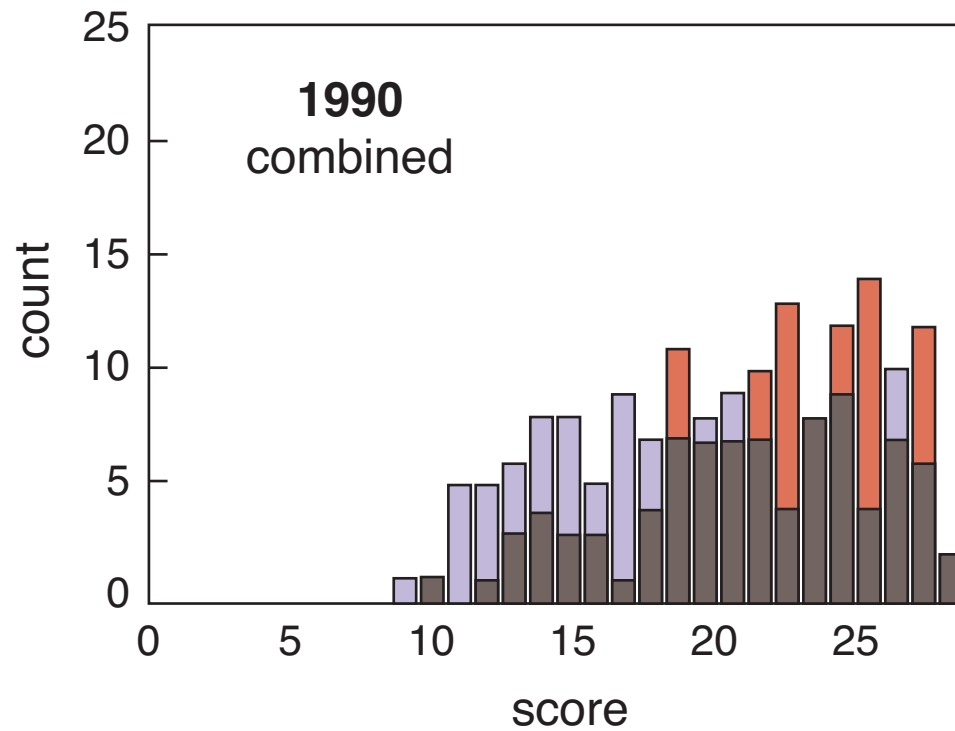
Education

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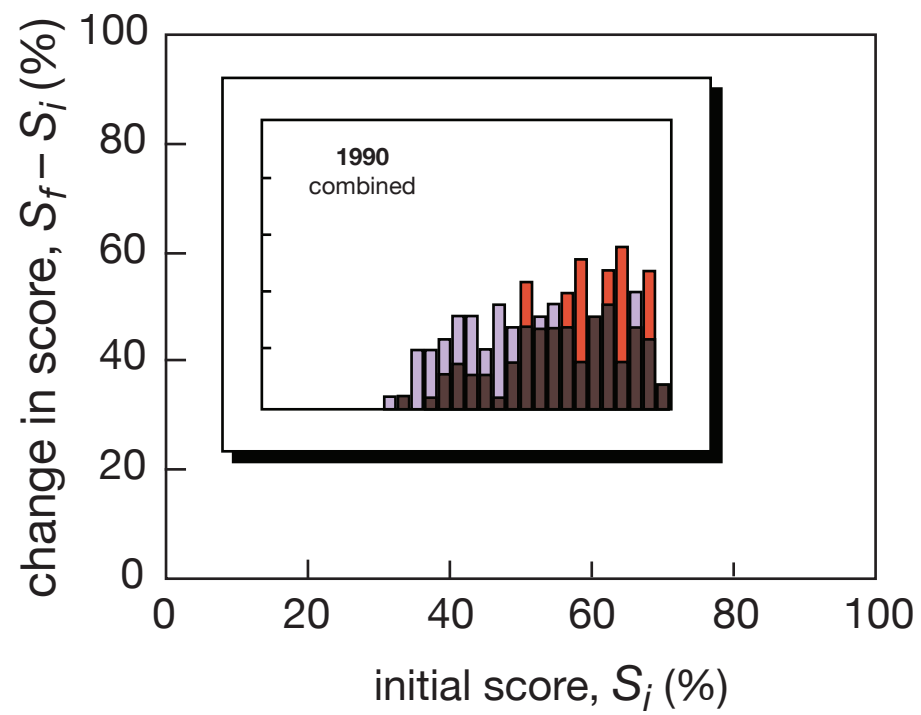


Education

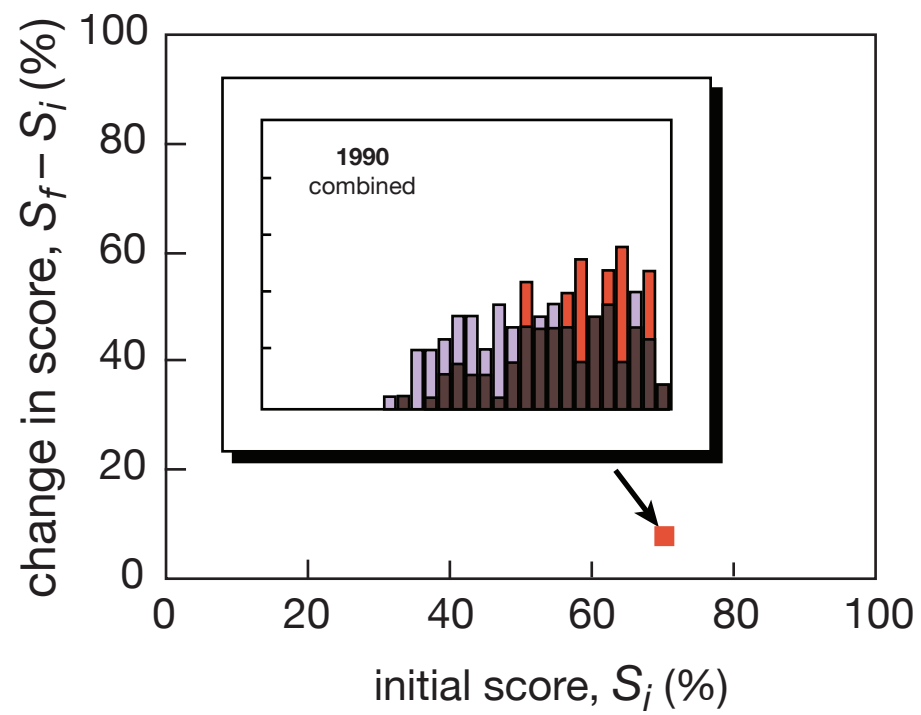
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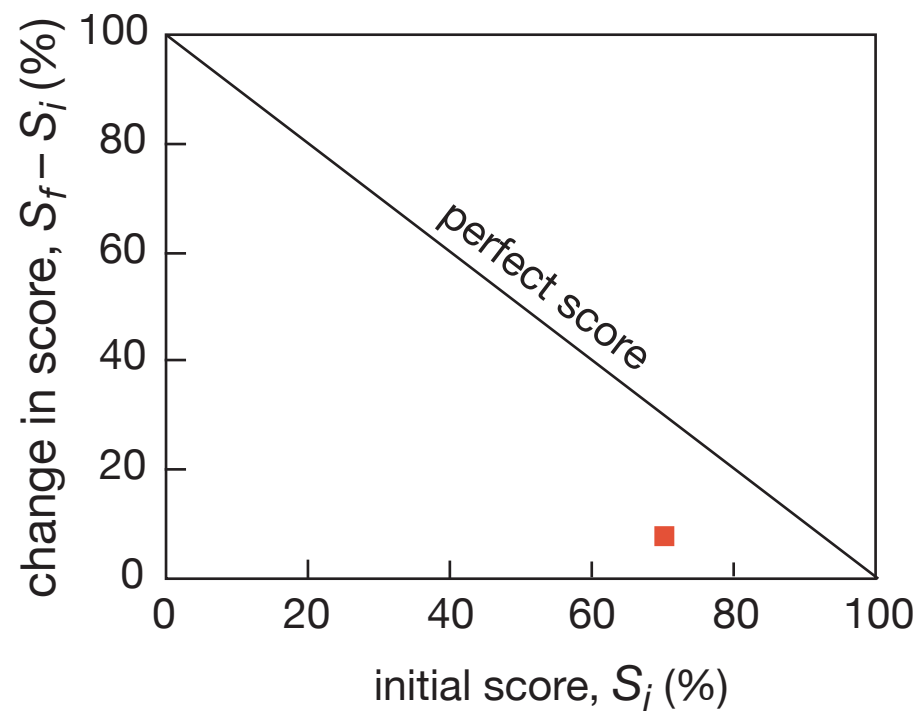
Education



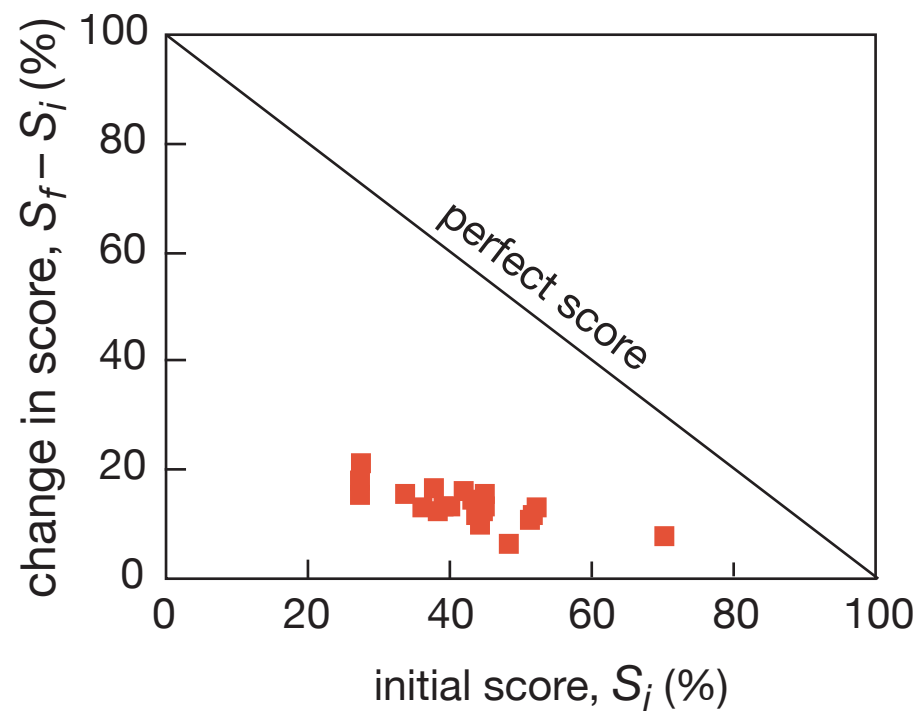
Education



Education



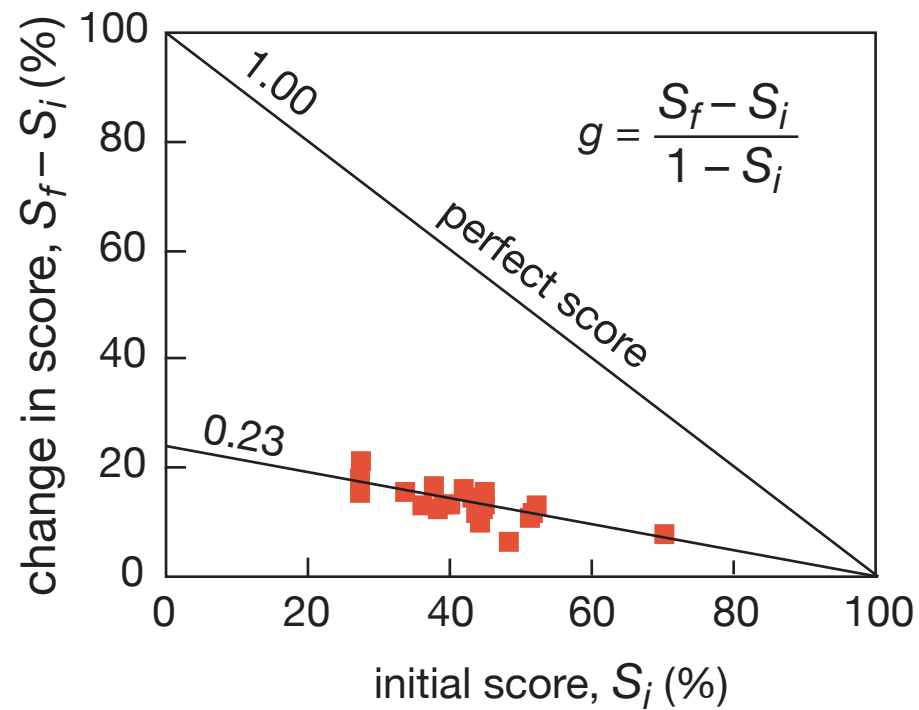
Education



R.R. Hake, *Am. J. Phys.* 66, 64 (1998)

Education

only one quarter of maximum gain realized



So what should we do?



Peer Instruction

Give students more responsibility for gathering information...

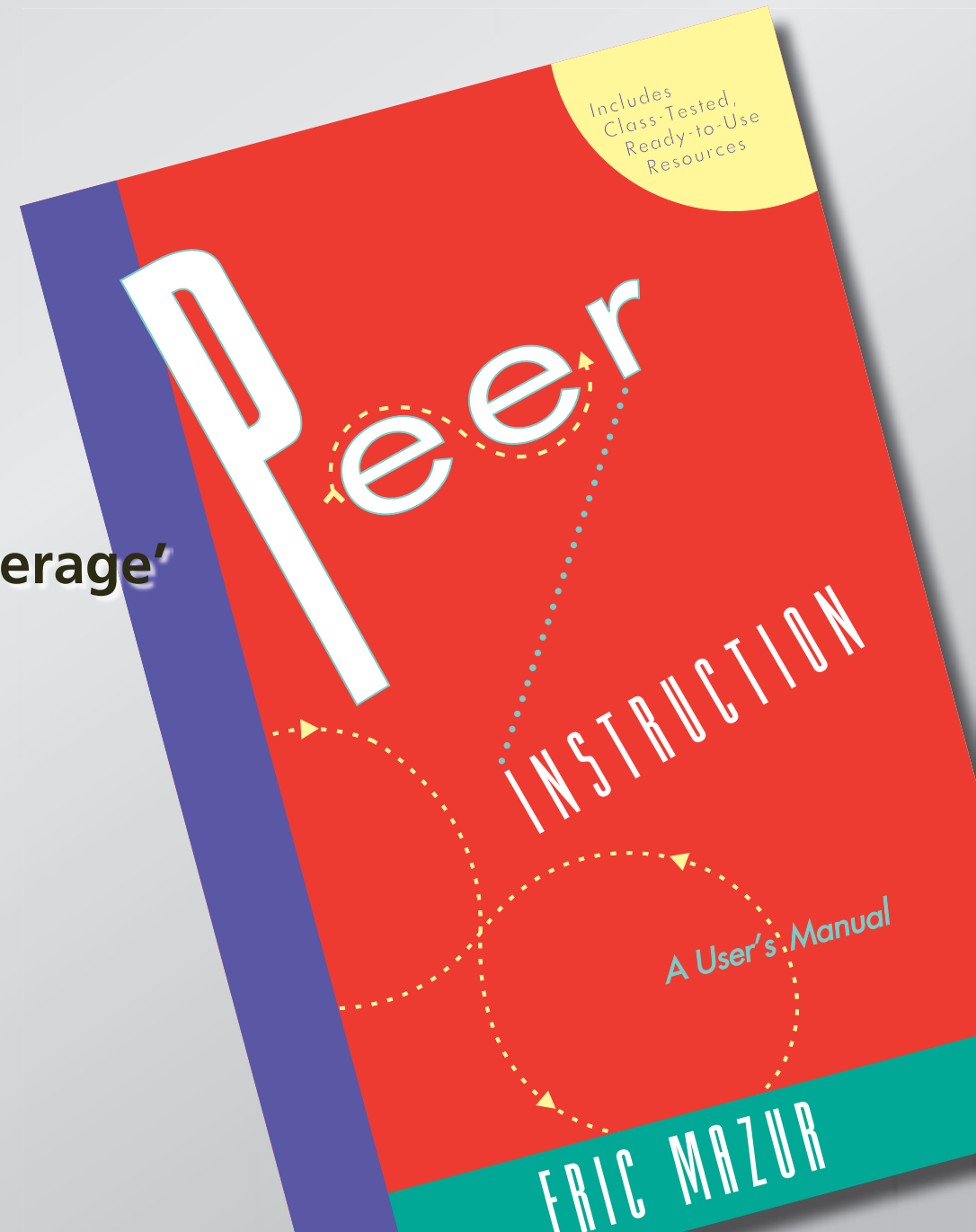
Peer Instruction

**Give students more responsibility for gathering information...
so we can better help them assimilate it.**

Peer Instruction

Main features:

- pre-class reading
- in-class: depth, not 'coverage'
- ConcepTests



Peer Instruction

ConcepTest:

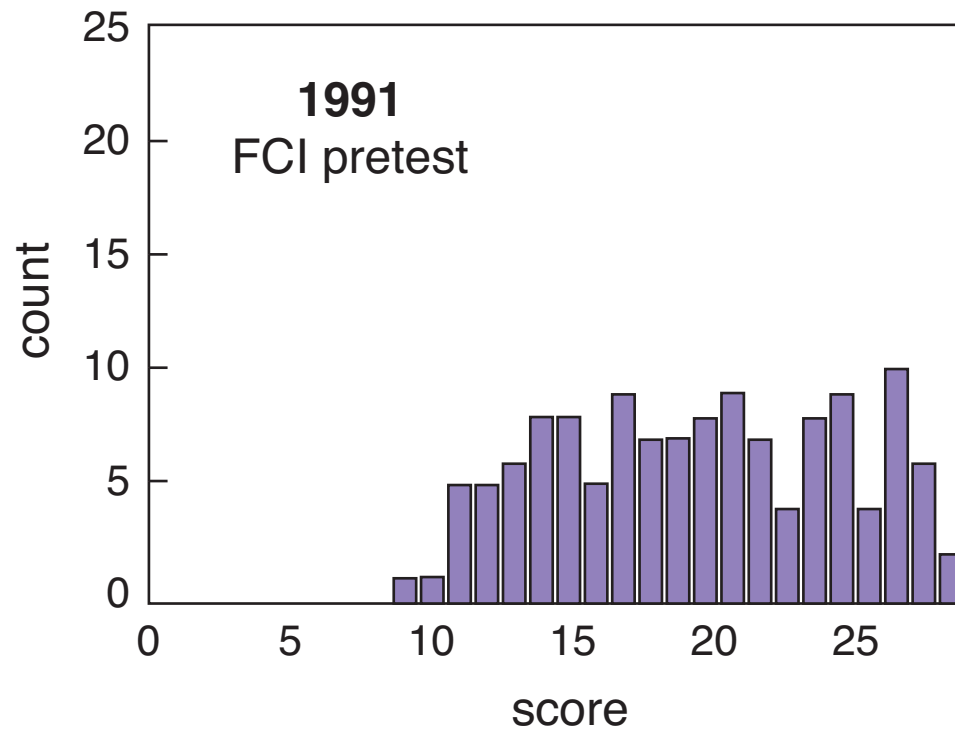
- 1. Question**
- 2. Thinking**
- 3. Individual answer**
- 4. Peer discussion**
- 5. Revised/Group answer**
- 6. Explanation**

Results

is it any good?

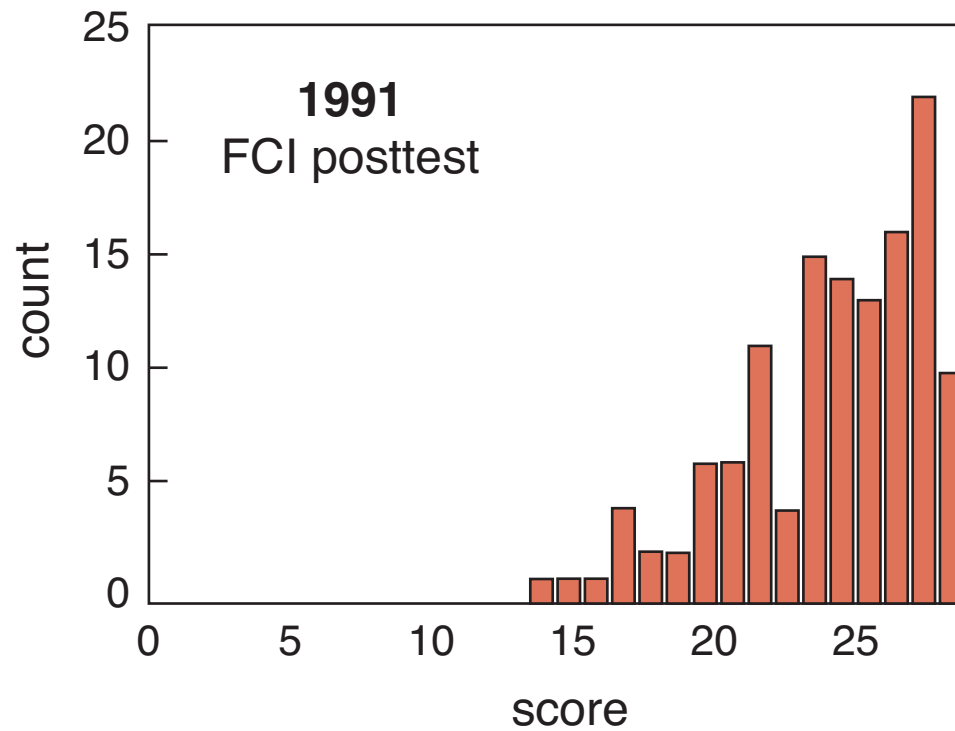
Results

first year of implementing PI



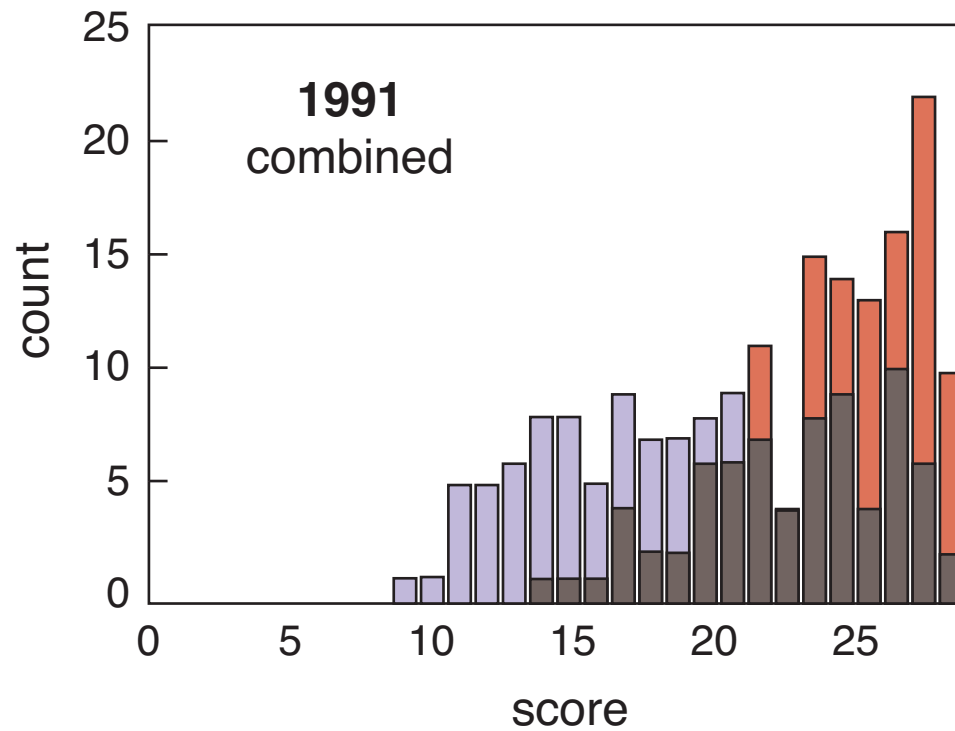
Results

first year of implementing PI

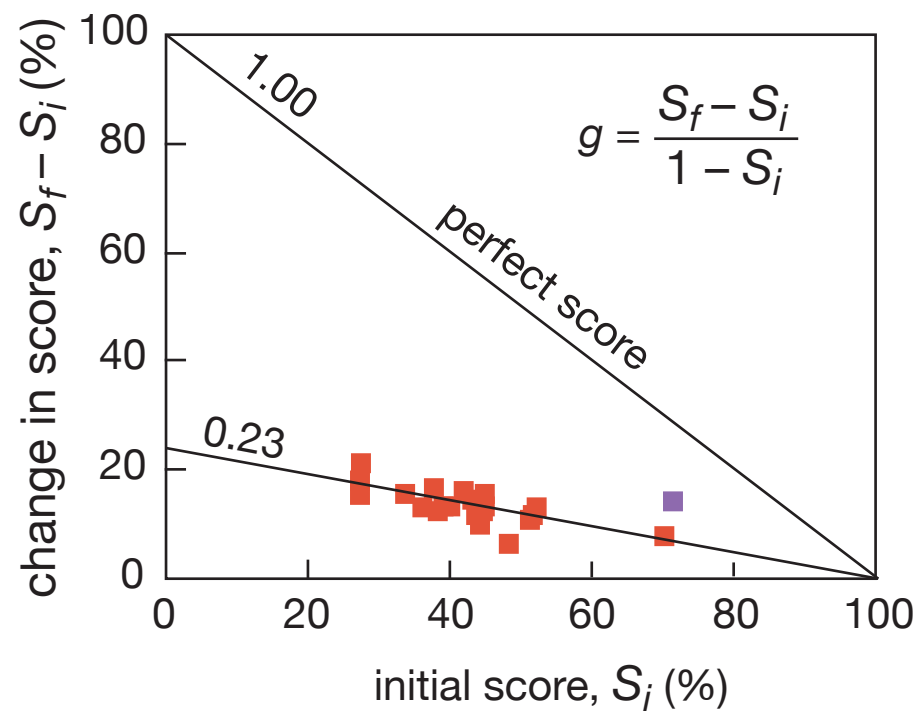


Results

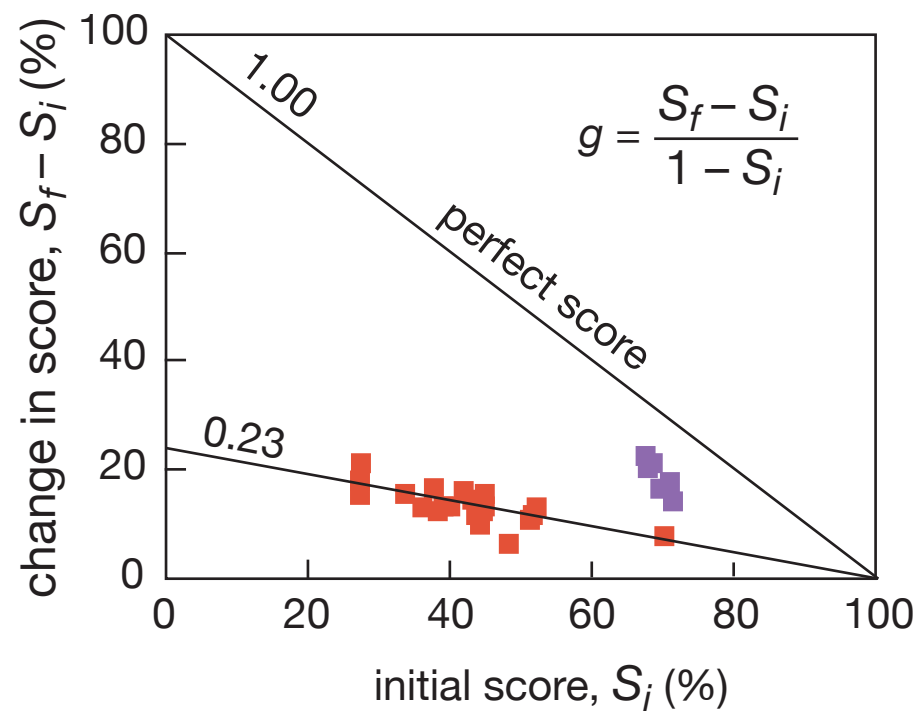
first year of implementing PI



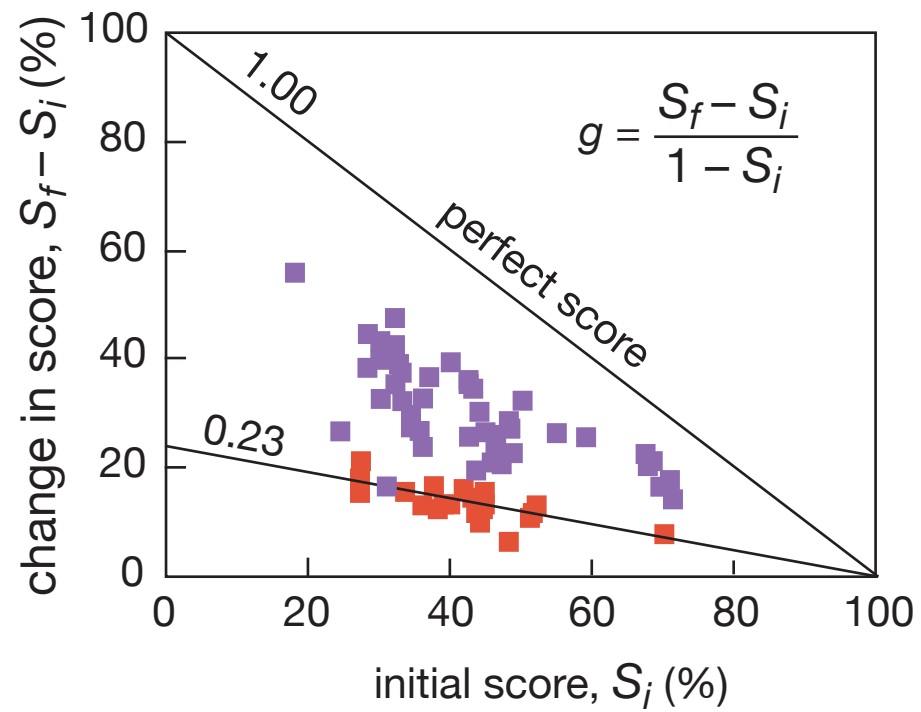
Results



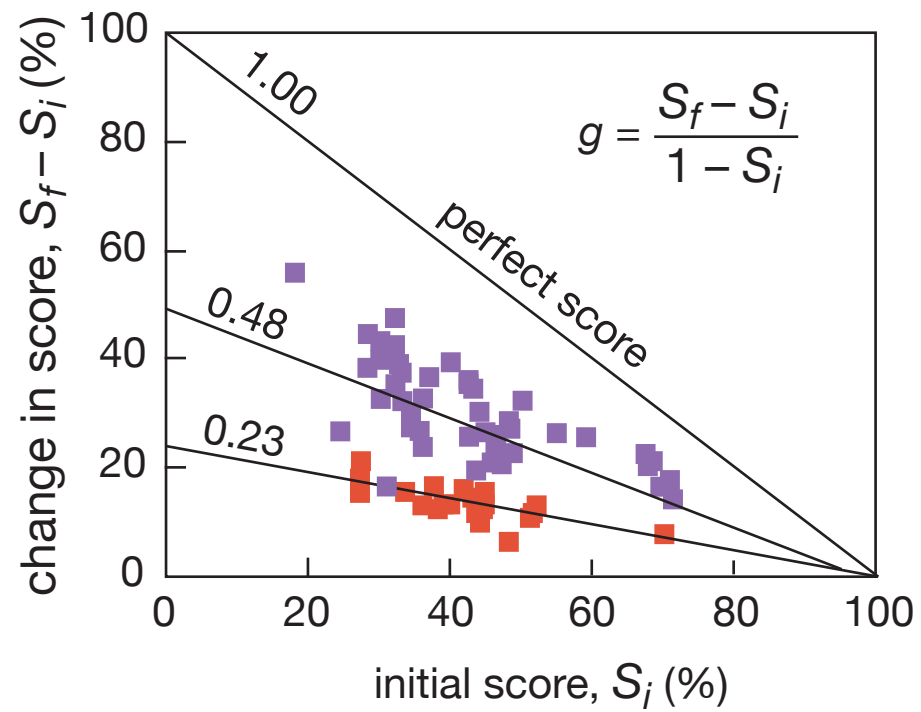
Results



Results



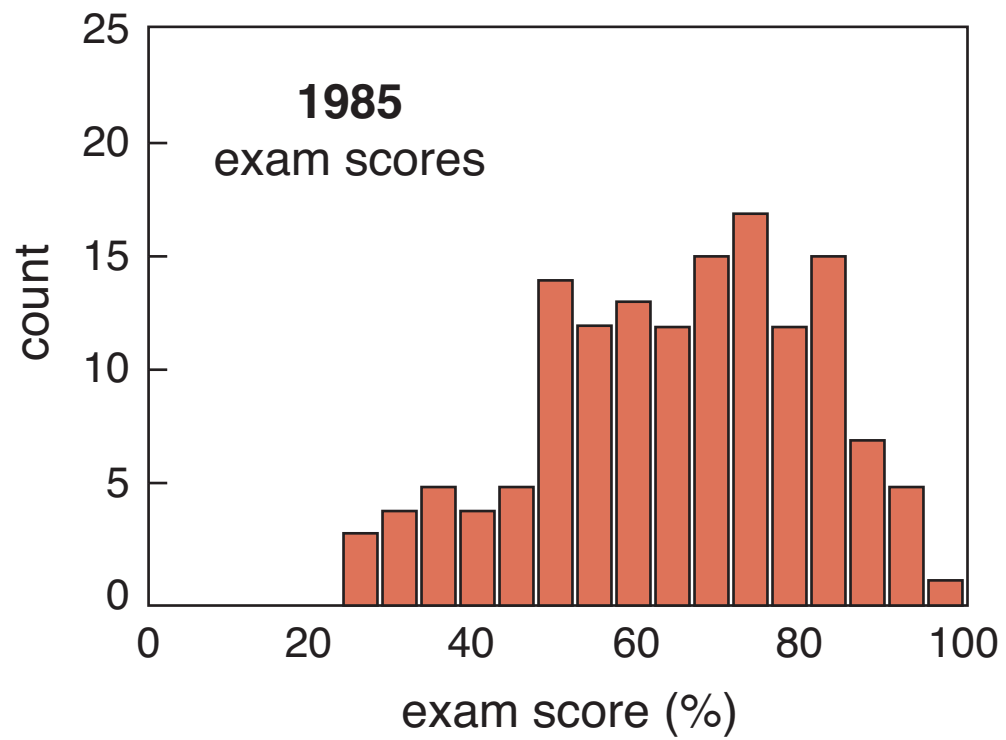
Results



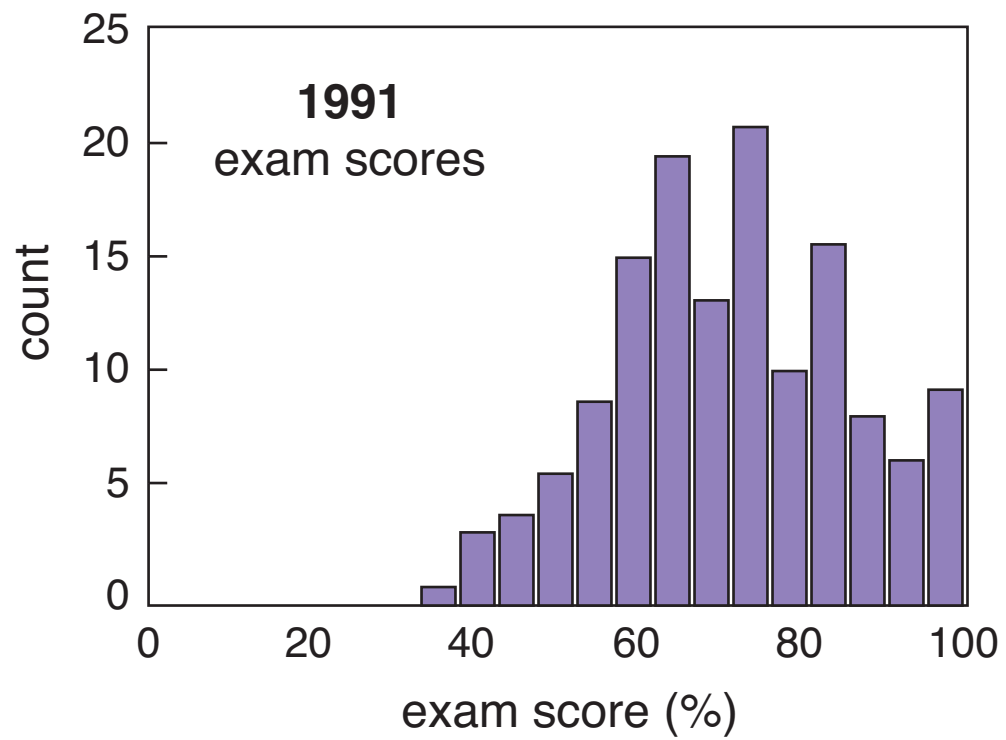
Results

what about problem solving?

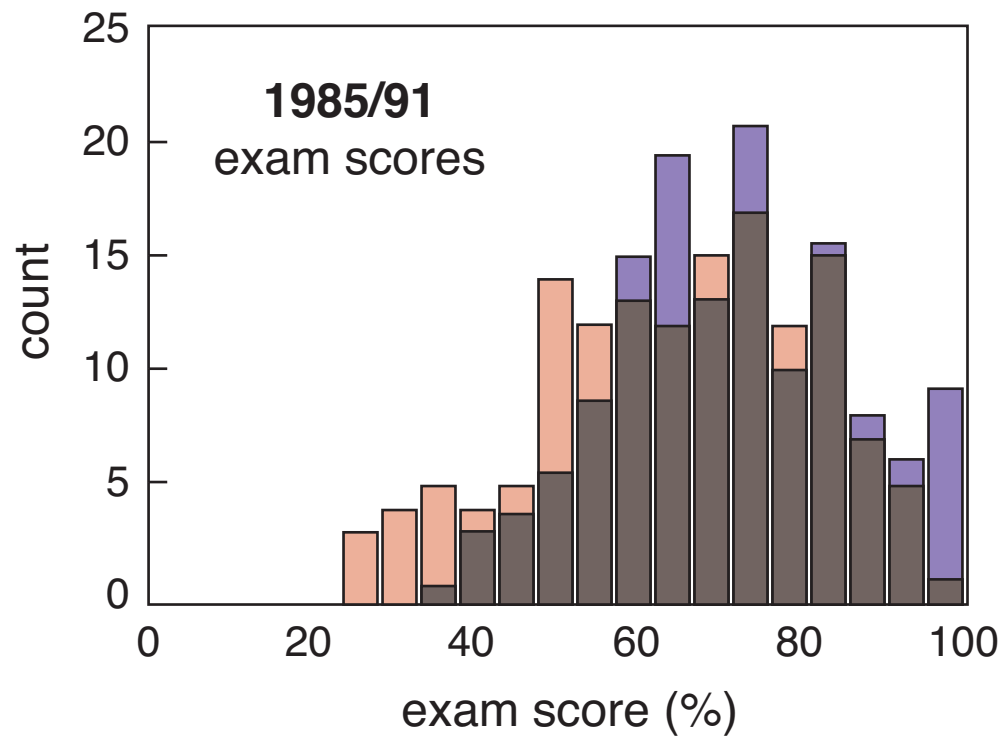
Results



Results



Results



Conclusion

**So better understanding leads to better
problem solving!**

Conclusion

So better understanding leads to better problem solving!

(but “good” problem solving doesn’t always indicate understanding!)

Summary

Traditional indicators of success misleading

Summary

Traditional indicators of success misleading

Education is no longer about information

Funding:

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