

Benefits and Challenges of Teaching in an Active Learning Environment



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Bias in Education

As faculty, we often think (whether we realize it or not) that “it worked for me, so it should work for you.”

But:

1. You are exceptional
2. Even if it worked well for you, that does not mean it was the *best* way to learn.

SCALE-UP



Student-Centered Activities for Large Enrollment Undergraduate Physics

SCALE-UP

~~Student-Centered Activities for Large Enrollment Undergraduate
Physics~~

**Student-Centered Active Learning Environment for
Undergraduate Programs**

SCALE-UP

~~Student-Centered Activities for Large Enrollment Undergraduate
Physics~~

~~Student-Centered Active Learning Environment for Undergraduate
Programs~~

**Student-Centered Active Learning Environment with Upside-
down Pedagogies**

Atmosphere Matters

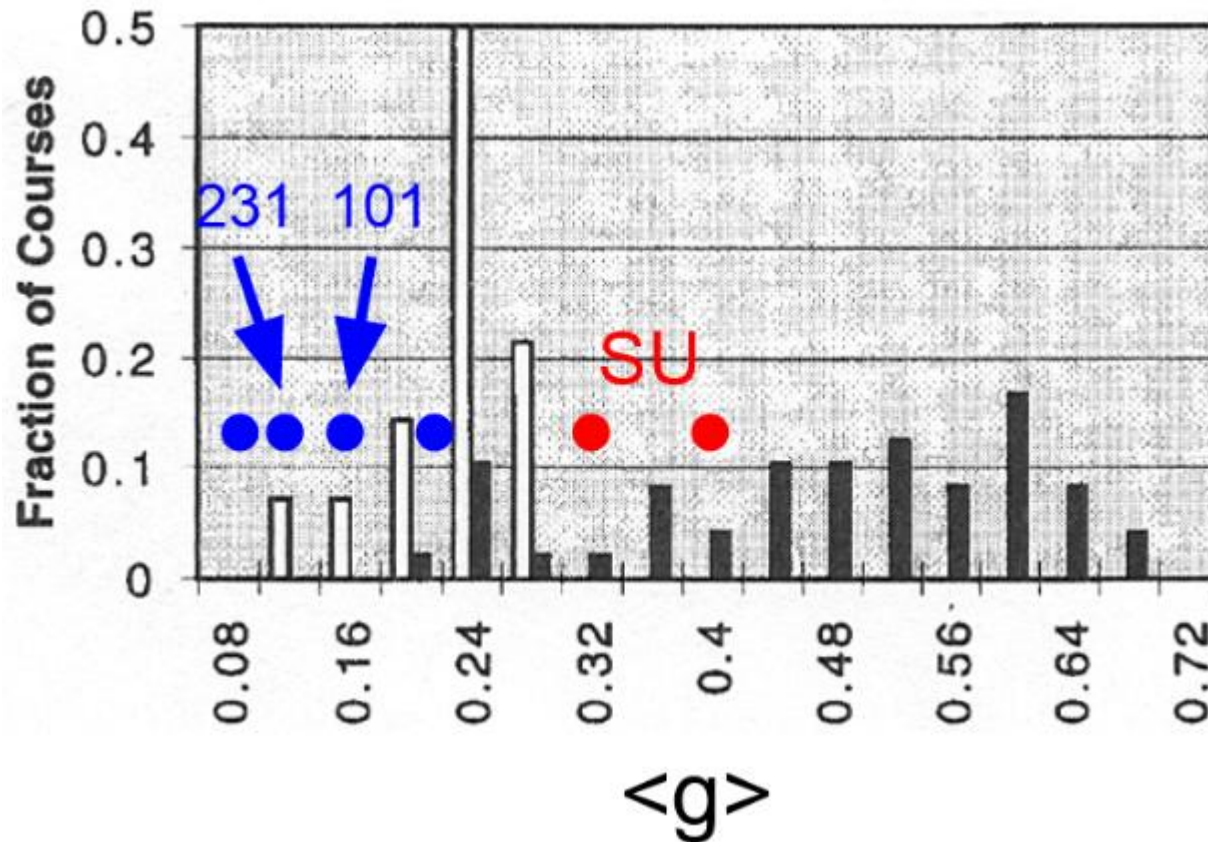
In order to foster interaction, it is critical to have a space that is designed for the task.

The SCALE-UP classroom you see is an example of a specially-tailored learning environment.



How Did We Do?

Force Concept Inventory, Pre and Post Results



Selected Student Comments

One of the Happy Reviews:

“It gives you time to practice what you learned, this is the best way to learn physics”

One of the Unhappy Reviews:

“With the teacher so up close, he knows when you are absent or asleep”

Conclusion

SCALE-UP (or likely another Active Learning Environment) can produce excellent results

It takes buy-in from teaching staff and students

A Department does not actively work to maintain the environment, it will slowly revert back towards lecture