

Differences between Chinese and American Physics-Education — A Low-Quality Comparison

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Both are particularly famous for physics education and research in their own country.

Materials for the Project

- 1 Personal Experiences
- 2 Interviews with two CU professors, one in Phys. and the other in APS
- 3 the fact that I received no response after emailed out a short survey to 9 Chinese professors
- 4 Observations of one E&M recitation
- 5 Interviews with 4 CU Chinese graduates who are or used to be TAs.

About Teachers

The conclusions that follow are based on the first 3 kinds of materials. As the scope of the materials is so limited, the conclusions may be strongly biased.

- ① Chinese professors are generally less interested in physics-education research than American professors
 - The APS professor thought some points from PE research very interesting and willing to try them
 - The fact of the no-response survey tells that Chinese professors are not interested in taking survey about teaching
 - Personal experience: Chinese professors are more interested in research than in teaching because their benefits almost purely depend on their research.
- ② In graduate level, American professors generally care more about students learning quality. This is purely personal experience.

About Students

US: tend to ask questions immediately when questions come up
CH: tend to ask questions after class

US: unwilling to memorize math stuff
CH: have much more math stuff in memory

About Recitation

Chinese Recitation

- only a few times a semester
- same class-scale as the lecture
- usually a lecture-fashion class on exercise problems given by the TA
- student attendance is usually lower than that in the lecture

American Recitation

- nearly once a week
- about 12 students a class
- a group-work-fashion class mainly on exercise problems but could be everything on the subject; **with facilities for simple physics experiments**
- student attendance is almost 100%

US

challenging, but not quite difficult
high requirement for learning quality

CH

usually too difficult
low requirement for learning quality

The End.