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

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Sample Universities

- University of Colorado at Boulder (CU-Boulder)
- University of Science and Technology of China (USTC)

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%
## About Graduate Courses

<table>
<thead>
<tr>
<th>Country</th>
<th>Description</th>
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| US      | challenging, but not quite difficult  
          | high requirement for learning quality |
| CH      | usually too difficult  
          | low requirement for learning quality |
The End.