Table 1

* We match students with their teachers to obtain separate samples for Chinese, English, and math.
* Sample size and descriptive statistics are similar across subjects.
* Note that we standardized score and self-concept to be mean zero and unit SD within each school.

Table 2

* To confirm random assignment in our data, we regress teacher education and experience against student baseline scores and characteristics
* And show evidence that baseline covariates are generally not significant determinant – neither individually or jointly - of their assigned teacher’s education or experience
* We reasonably assume that teacher-student assignment was random and teacher characteristics are independent from unobserved factors that also impact student learning

Table 3-4

* Teacher education on score outcome, we found that,
  + consistent with the literature, teacher education does not have causal impact on student performance
  + but math teachers with a graduate degree are significantly less effective than their colleagues
* Self-concept outcome estimates
  + confirm this pattern in math
  + but we did capture a positive impact of graduate degree for Chinese teachers

Table 5, 6 and figure 1, 2

* as for teacher experience, our findings echo the two patterns in literature
  + first, more years of experience do not impact student performance nor self-concept
  + moreover, when we collapse years of experience into three-year bins and use each teaching cycle as a dummy variable to estimate, compared to the first cycle (0-3 years, red dotted vertical line in the plot), how teachers in different teaching cycles impact student differently, we found that,
    - no difference in teaching effects on Chinese score
    - but for math and English, teachers in early career (0-3 years) are most effective, then became more and more less effective until somewhere around twenty years, then level up a bit in their late career
    - this pattern is confirmed on self-concept outcome across all three subjects