Out-of-School-Time Study Programmes: do they work?

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OST programmes in UK

- curricular activities in which the child is involved outside lessons but within the school setting
- they were offered (at the time of the study) in the vast majority of secondary schools and their cost is estimated to be around £7 per session per student
- in **teacher-led programmes**, the role of the teacher involves a combination of supervision and instruction. ~44% participation.
- in **self-directed study clubs** (also called drop-in sessions) the students work together without the teacher. ~ 32% participation.

Why OST programmes might be effective in England?

- US Research (not all robust)
  - indicates that participation in OST programmes improves academic performance of at-risk-of-failure students, with from low to moderate gains in mathematics and reading
  - focusing OST activities on regular academic programmes is best
  - older students are more difficult to recruit than younger children
  - minimum duration required for an OST programme to be effective is roughly 45 hours. However, longer OST programmes do not necessarily have more positive outcomes
- UK: different setting. MacBeath et al., 2001.: + effects on KS3 & GCSE

Why OST programmes might be particularly effective for disadvantaged students?

Disadvantaged children may have more risky and less stimulating out-of-school-time hours within families. Hence:

- Quality of OST hours, relative to the alternative, is high for this group
- Need for, and effectiveness of, additional tuition may be greater

Thus low-income and low-achieving children are more likely to benefit from OST programmes

Questions

Focusing on school-based programmes that are linked to the academic curriculum, since previous research has suggested that these are the most beneficial for academic achievement:

- What is the effectiveness of OST programmes in improving GCSE overall achievement?
- Are OST programmes more beneficial for lower socio-economic background children and low achieving children (at KS3) than to higher socio-economic background and highly achieving children?

Impact evaluation problem: how GCSE performance would change among OST attendees had they not attended the programme?

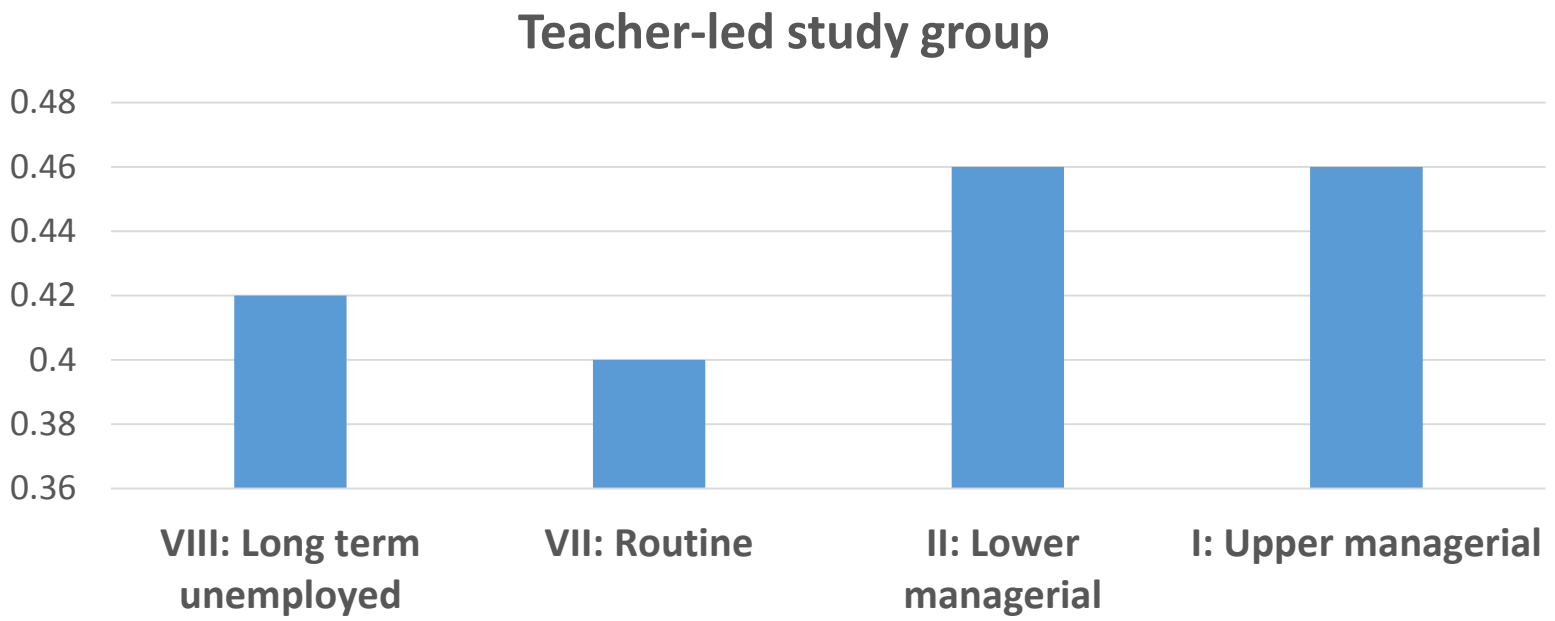
- Ordinary least squares
- Propensity score (PS) matching to estimate a credible counterfactual outcome
  - The comparison group is similar to the treatment group in respect to observed characteristics, i.e. both groups have similar prob of participation as estimated by pre-"treatment" relevant covariates.
- School-fixed effects

Data

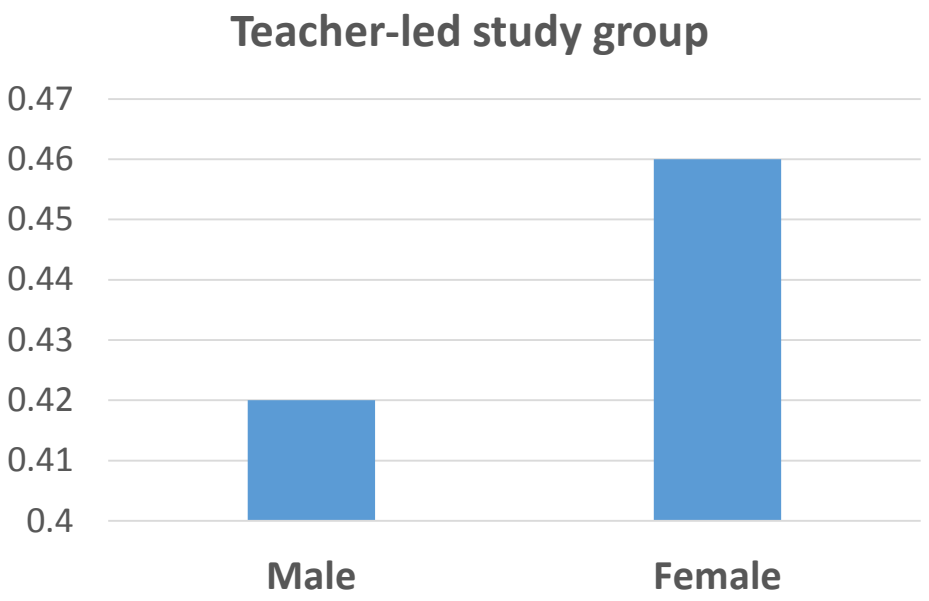
- Longitudinal data from Next Steps (1989/90 cohort) containing rich info on background and personal characteristics and linked administrative data on achievements and school-level characteristics. KS3 and GCSEs (2006) are our measures of performance
- The dataset contains information on the two main forms of curriculum-based OST programmes implemented in UK schools.
- Members of LSYPE were asked in year 9 and 10 (before taking GCSEs) whether their school had such programmes and, if yes, how frequently they attended each programme.

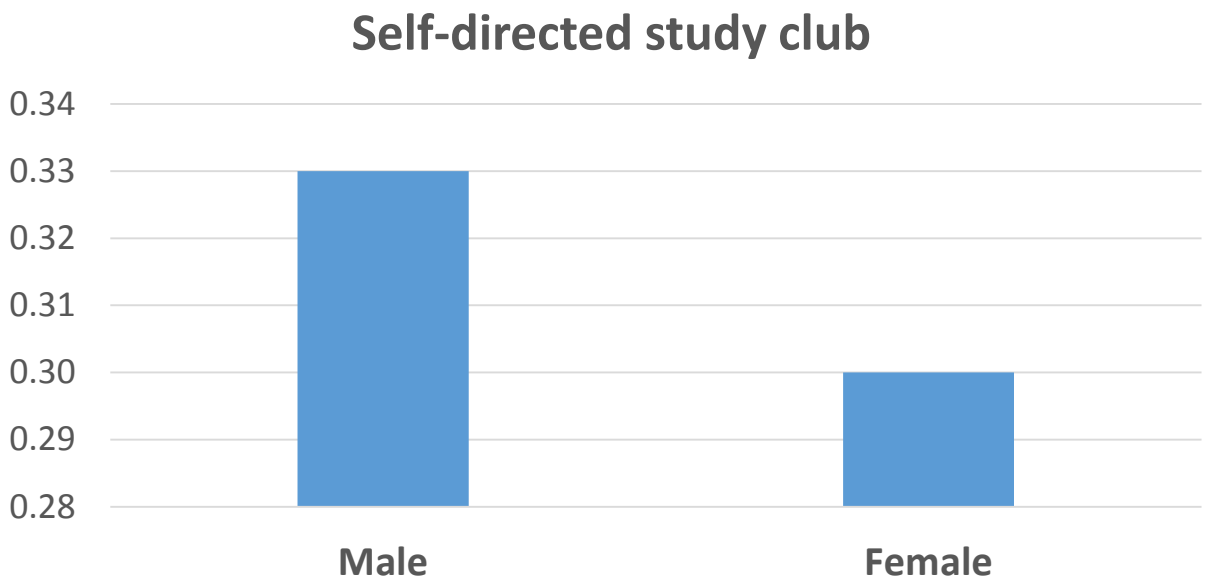
Participation

Participation by social class of origin. Selected categories

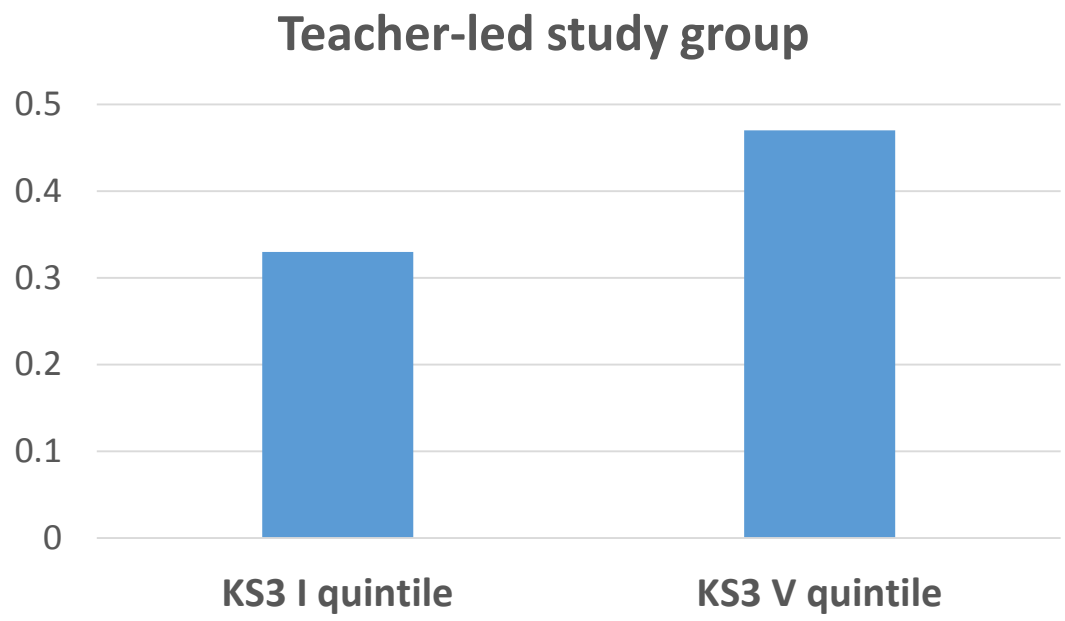


Participation by gender

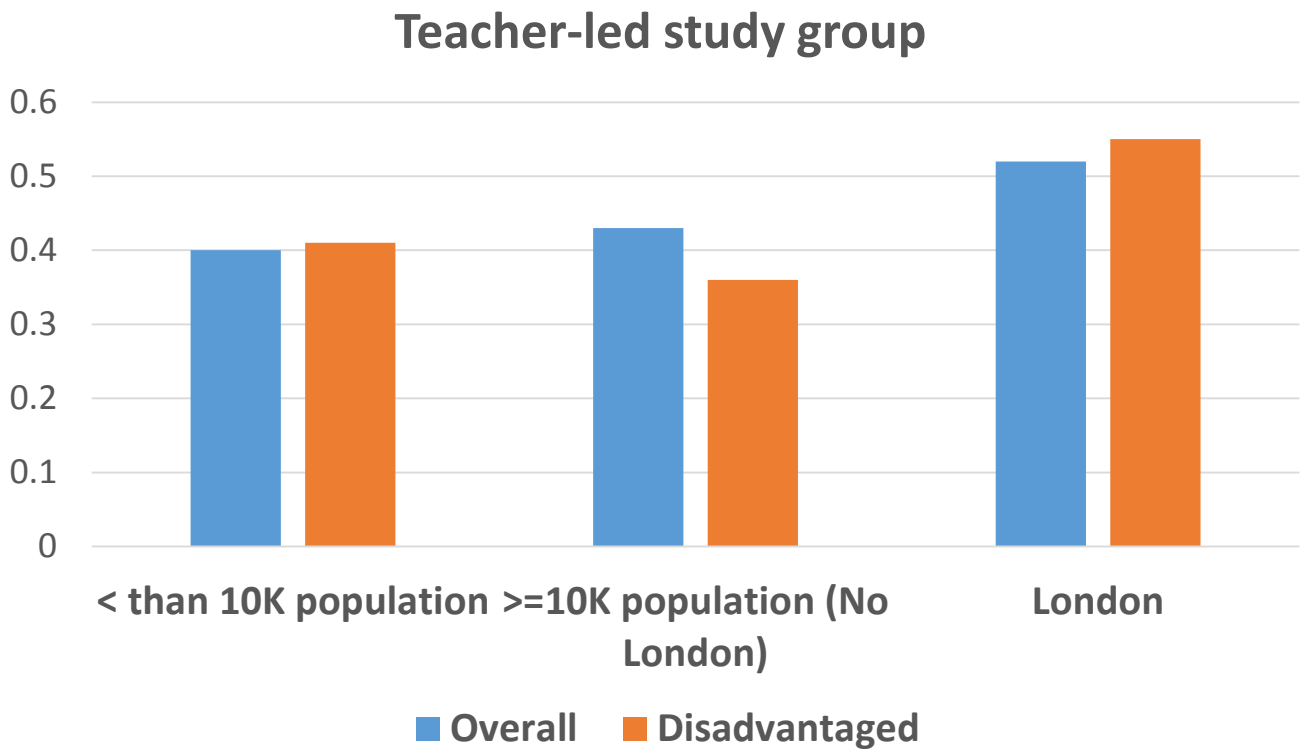




Participation by prior academic achievement. Selected quintiles of KS3 score



Participation by region



Not only is the participation in London higher, but also the participation gap between social classes is overturned within London. There, children from routine and unemployed classes participate significantly more than all other classes.

Overall effect on GCSE total score

The effect of OST programmes at age 14/15 (year 10) on academic performance (GCSE scores, year 11)		
	Teacher-led study group	Self-directed study club
OLS	3.6**	-0.03
PSM	3.2*	-1.64
SFE	2.7**	-0.19

- OST programmes are effective as long as they are teacher-led
- Effect size around 3 = half a grade in one subject out of 8 best GCSE results
- Estimates of the average effect size are less optimistic than previous UK research and more in line with US research

Can OST compensate for previous disadvantage and reduce the achievement gap between children from differing socio-economic groups?

The effect of teacher-led study groups at age 14/15 (year 10) on academic performance (GCSE scores, year 11) by social class: a PSM model for each group		
Social class		
Long term unemployed and Routine occupations	10.7*	
Semi-routine and Lower supervisory occupations	-2.8	
Small employers and intermediate occupations	-0.1	
Lower managerial and lower managerial occupations	2.3	

- The analysis by subgroup shows that teacher-led study group are particularly beneficial to lower class students
- The effect for unemployed and routine classes amounts to 11 points=improving 2 grades in 1 subject or 1 grade in two subjects (among best 8 GCSEs)

Other results

- Duration of exposure: in line with previous research, attending the programme more than occasionally does not seem to improve GCSE total score
- There are no longer term effects: participation in previous year (9) does not affect achievement later on

Implications

- OST programmes should be available in all schools
- If the aim of providing OST programmes is to increase academic achievement, not only they should focus on the curriculum, they should also be teacher-led
- Where steps can be taken to encourage greater participation among disadvantaged children, the benefits are worth having in relation to cost
- 55% of children from disadvantaged social classes can be incentivised to participate in teacher-led OST programmes. It should be possible to achieve similar levels elsewhere, where only 36% of the disadvantaged participate