

Evaluation Summary	
Age range	Primary (Year 5 and 6)
Number of pupils	c. 1600
Number of schools	80
Design	Randomised controlled trial with randomisation at the school level
Primary Outcome	

Proposed protocol for EEF-funded evaluation of 'Children's University social action trial'

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Introduction

The project to be evaluated is an intervention as part of 'Youth Social Action' taking place in primary schools in northern England. It is led by the Children's University (extra-curricular activities for disadvantaged pupils) whose work is intended to impact on levels of pupil attainment, a range of wider non-attainment outcomes such as aspiration, motivation and self-confidence, and some longer-term outcomes such as enhanced opportunities for subsequent employment.

Children's University (CU) works with pupils aged 5-14. The intervention involves social action opportunities such as environmental projects, after-school clubs and enrichment activities leading to credits and 'graduation'. The standard programme provides a range of learning activities outside schools hours such as in lunch breaks, after school, holidays, and weekends. Children make their own choice of activities and receive a stamp in their CU *Passport To Learning* upon completion. Children attend a specified number of sessions in order to gain CU credits and work towards CU Certificates of Achievement (from Bronze Undergraduate Award level (30 hours) to Gold Fellowship level (1000 hours) and various accolades in between. A set of new social action modules is being introduced whose idea is to promote volunteering, networking within and across the communities and the experience of learning beyond a classroom environment. Traditionally, CU has been funded by parents which means that payment of fees could have been a barrier to some. The majority of parents pay the £5 individual child membership charge (covers the cost of the passport and graduation) which is renewed each time the passport needs to be replaced (12-18 months on average). However, for children from the lowest income families this cost is waived – it is covered by Pupil Premium or university/corporate partners via widening participation/CSR budgets – to ensure no child is prevented from participating. The feasibility of the programme has been established through previous self-evaluations by CU in conjunction with Cambridge University (MacBeath and Waterhouse 2008, MacBeath 2012). The volunteers with parents able to pay who attended

previous CU programmes have reported high levels of satisfaction, higher levels of attendance at school than average, and higher levels of subsequent attainment (literacy and numeracy) than those who did not volunteer, or otherwise could not attend (MacBeath 2011, 2012). However, the programme was linked to improvement for the already high attaining groups. In addition, these prior evaluations have some statistical and analytical problems. Therefore, the CU is ready for a fair test of impact in a randomised controlled trial. Here it is the addition of new social action modules that are being tested. CU will not make these compulsory which is likely to dampen any impact. In the case of this trial, the objective is for children to complete a minimum of 30 hours of CU activity each year of which at least 50% will be social action focussed. The test is of the availability of these modules within more general CU activities compared to no CU activities.

## Impact evaluation

### *Design*

The trial has a waiting-list design, in which all schools recruited receive the intervention within three years, but in which only around half receive the intervention immediately. This is fair, and should reduce any post-allocation demoralisation or dropout. CU is planned to take place over two school years. However, interim results will be obtained after one year.

### *Sample*

The trial will take place in Northumberland, Middlesbrough, Lancashire and Fylde and Wyre, all relatively deprived areas in the north of England. A total of 80 primary schools will be recruited to set up a CU-led activity site on their premises. According to CU, this represents around 26% of all relevant primary schools in these four areas (Table 1). A further 10% are already linked to CU activities and so cannot be used for this trial. Northumberland is could be used as a contingency though efforts will be concentrated on recruiting sufficient schools from the other three CU areas listed.

Table 1 – Indicative number of schools in each area

Location	Total Number of Primaries in Location	Number of Primaries Currently Involved in CU	Target Number of Schools to be Recruited for Evaluation	Recruited Schools as a % of 'Clean' Schools
Fylde & Wyre/Blackpool	64	0	15	23%
Lancashire (other than above)	163	7	50	32%
Middlesbrough/Stockton	41	14	15	56%
Northumberland	123	18	15	14%
Total	391	39	90	26%

Other social action interventions are planned in some of these areas but they are very small scale and/or involve secondary schools, and so should not cause any interference. Given their track record and the incentive provided by being part of the trial, CU are reasonably confident that the target of 80 schools can be recruited. It is planned to offer 20 pupil places across Years 5 and 6

in each school at the outset, but CU have stated that they will accommodate all volunteers over and above 20. CU will have responsibility for recruiting schools.

### *Allocation*

The 80 schools in the CU trial will be evenly divided into two groups using a pseudo-random number generator. The sampling and the allocation procedure will therefore be at school level. Randomisation will take place for each area separately at the request of the developers to encourage viable numbers in each. A planned 40 schools will receive the intervention from September 2014, and the intervention will be phased in at the other planned 40 schools from September 2015.

The programme leaders envisage around 60% of pupils volunteering. All volunteering pupils in Years 5 and 6 will be allocated a place, with a proposed minimum of 20 per school for viability. The delivery will start after September 2014, with the Year 6 pupils receiving one year of intervention and Year 5 receiving two years. Control schools can start the programme for their Year 5 and below in the second year, and/or for their new Year 6 in the third year (Table 2).

Table 2 – Summary of key events by year group over time

	2013/14	2014/15	2015/16
Year 4 treatment schools	Pre-test	Intervention plus attainment post-test as Year 5	Intervention and post-test as Year 6
Year 5 treatment schools	Pre-test	Intervention and post-test as Year 6	Secondary school
Year 4 control schools	Pre-test	Attainment post-test as Year 5	Post-test as Year 6
Year 5 control schools	Pre-test	Post-test as Year 6	Secondary school

Considering only the 20 pupils active in each treatment school and their peers in control schools, there would be 800 pupils per arm. If these were individually randomised then Lehr's approximation (Gorard 2013) suggests that this would give sufficient power to detect an effect size as low as  $|0.14|$ . If the 80 randomised schools are treated as the cases, then 40 cases per arm would be sufficient to detect an effect size as low as  $|0.45|$ . In reality, the power will lie somewhere between these two (probably sufficient to detect an effect size of  $|0.28|$ ).

The trial has more than one type of outcome, and the effect sizes possible for wider outcomes are likely to be substantially higher than for attainment (Gorard and Smith 2010). Power will be enhanced by the likely correlation between pre- and post-test outcome scores. Assuming that the proposed numbers are achieved, this will be a powerful test. If fewer than 60 schools were to be recruited this would seriously endanger the trial.

There is a range of Youth Social Action trials taking place across England over the same time period as this one, and it is being planned that some of the outcome measures will be common to several of these. This creates the chance to aggregate the data from this trial with one or more of the others trials to create a much more powerful estimate of generic impact.

### *Testing for attainment*

The trial will use KS1 test results as the pre-intervention attainment measure, and KS2 test results as the post-intervention attainment measure for both year groups. After the first year of the intervention, Year 5 pupils will be asked to take a composite KS2 SATS paper or Year 5 Optional SATS papers in order to provide an interim result. For all years, the test will be for

English and maths. This approach will allow results in a number of subjects with the minimum load for schools and pupils coupled with high external validity. Measures will be in the format of fine point scores, and as total KS point scores per pupil. This approach will yield a cost-effective interim result by September 2015.

The Year 6 pupils will continue to secondary school in September 2015 and so can provide a long-term comparison for the impact of CU activities in Year 6 compared to standard schooling (not part of this evaluation). The primary outcome result for attainment will be calculated by September 2016, involving the original Year 5 pupils after two years of intervention, and the original Year 6 pupils after one year. Longer term (beyond the scope of this evaluation proposal) pupils can also be tracked in terms of subsequent qualification, education, and employment trajectories.

The primary outcome measures for attainment will be the scores for English and maths after two years.

#### *Testing the wider outcomes*

The issue of assessing the wider outcomes is more complex for three reasons. There are many possible inter-related and conflicting concepts involved, and fewer standardised instruments for such outcomes. Also it is important to use the opportunity to co-ordinate at least some of these measures with other Youth Social Action trials being run by the Cabinet Office. . The wider outcomes will be assessed pre and post-intervention via a bespoke instrument developed especially for use in this trial. This instrument will be developed in co-operation between evaluators, CU and other interested parties. It will be piloted in the remainder of the academic year 2013/14 in schools from areas unrelated to the trial.

The instrument will have some basic questions about respondents' lives and within this will be items about what kind of activities like the CU intervention social action modules they already do, and about how keen they are to undertake such activities. The pre-test results from the latter items can be used to help identify a fair set of comparator volunteers in the control schools (i.e. those who would have been in CU if their schools had been treatment schools). The wider outcomes pre-test will take place in the summer term 2013/14 for all year 4 and 5 pupils. The equivalent post-test will take place in the summer term of 2014/15 for all years 5 and 6 (originally years 4 and 5) pupils, and again in summer 2015/16 for all year 6 (originally year 4) pupils.

In addition, the instrument will contain a set of single item questions on a range of wider outcomes including reports of mental concepts, behaviour and future intentions. A number of suitable test items already exist, and can be adapted, such as those developed since 2003 as part of an ongoing EU-funded study of young people's views on school, society and justice, and their civic participation and willingness to assist others less fortunate than themselves (Gorard and Smith 2010). One of the lessons from early work (EGREES 2005, EGREES 2008) is that rather than using the usual psychometric approach of multiple questions for each theme, the single best item can be used instead (perhaps the item with the highest loading to the underlying 'factor' after principal component analysis). This approach is at least as accurate in terms of measuring these rather hard to pin-down concepts, and has several advantages including ease of analysis and reporting. For this proposal perhaps the most important advantage is brevity. It should be possible to assess or discuss via standard vignettes a wide range of possible outcomes in just *one* questionnaire for pupils. This will minimise boredom and dropout, and increase completion rates without substantial cost. Further possible items are being provided by ONS, the Cabinet Office, reviews of the literature, and professional advice.

Of particular interest here are measures of:

Communication  
Confidence/self-esteem  
Social skills  
Teamwork

The items must be measurable, malleable and considered important by stakeholders either in their own right or because they are linked to behavioural outcomes including attendance and participation. The instrument has to be suitable for all pupils, some with assistance, to respond to and so the reading-age must be suitable for Year 4 pupils, and the completion process should be pre-coded tick-box as far as possible. The instrument will be taken to each school by the evaluators, who will also oversee the completion process and collect and take away all completed forms for data entry and marking. A draft instrument is attached as an appendix

#### *Other data*

As standard, the study will collect and collate suitable background characteristics for pupils in both groups, in order to run sub-analyses (such as for FSM-eligible pupils or boys and girls separately) and to assist potential generalisation of the results to other schools and areas.

It would also be interesting to collect any outcome data in common with similar on-going interventions elsewhere. This could be for comparison, and to add to any aggregated analysis where feasible.

#### *Analysis*

Two main analyses will be conducted. One will assess the impact of the intervention on the volunteer and participating pupils only. The other will assess the impact on the whole school. Each analysis will follow the EEF guidance protocol. In summary, each outcome measure will be analysed using the pre-test to control for prior attainment. The results will be expressed as Hedge's g effect sizes.

The headline results for attainment will be the effect size for the post-test KS total points scores in both English and maths, based on the whole school year group after two years. This will be clear but conservative. Secondary results will be calculated for both English and Maths following the EEF guidance protocol. Once the wider outcome instrument is developed CU will be asked to nominate no more than three items for the same whole school pre- and post-treatment to act as the primary wider outcomes. This is to prevent post hoc dredging for success given the likelihood of so many possible results.

In addition, the main analyses will be re-run with FSM-eligible pupils only, and for boys and girls and each year group separately. A regression model will be created for each primary outcome, with the post-test score as the predicted variable, and the pre-test score, pupil background variables and treatment group as predictor variables. Further analyses and models can be run by agreement.

Given the relatively small number of cases (schools) in a trial of what is essentially a set of school-based interventions, and given the underlying similarity of the approaches, the results will be aggregated where possible with those from at least one other trial of youth social action. This could be done for attainment, self-confidence and a small number of other previously agreed wider outcome measures. This will provide an even more powerful estimate of the impact of the kind of activities from several organisations, and add value from running the trials in the same way as far as possible. The plan would then be to report the result of this trial individually and in aggregate.

## Process evaluation

The fieldwork for the process evaluation will be standard for EEF work, and include observation of setup, training, implementation, and testing for each intervention. This will provide formative evidence on all phases and aspects of the intervention. This can be used to help assess fidelity to treatment, and the perceptions of participants including any resentment or resistance, and to advise on improvements and issues for any future scaling up.

Around 12 schools will be considered in depth and with follow-up visits to assess progress over time. The site visits will lead to the generation of some additional data from observation and interviews with staff, focus groups with pupils, discussions with parents and CU managers, plus observation of training, delivery and testing. These will all be as simple and integrated and non-intrusive as possible. The schedule of visits will be agreed with the intervention team and the schools. Schools will agree to be part of this evaluation when agreeing to be part of the intervention.

## Indicative Timeline

December 2013-	Development of battery of test items
March 2014-	First pilot of wider outcome test materials Observation of school recruitment process Observation of training for intervention
May 2014-	Schools get consent and provide UPNs Second pilot of wider outcome test materials if needed
June 2014-	Pre-test for wider outcomes, Years 4 and 5 Randomised allocation of schools to two groups
September 2014-	Intervention starts for Years 5 and 6 Schools provide prior KS scores and pupil background data Start light touch observation as part of ongoing process evaluation Interviews with project members, staff and pupils
May 2015-	Conduct post-testing for wider outcomes, Years 5 and 6 in all schools Conduct combined SATS English and maths, Year 5 Update background data Analyse outcome data Synthesise with process evaluation data
October 2015-	Complete EEF report on initial results
May 2016-	Conduct post-testing for wider outcomes, Years 5 and 6 in all schools Update background data Analyse outcome data
October 2016-	Complete EEF report on all results for CU

## References

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