

## The Place of Randomised Controlled Trials in Educational Research: A Case Study

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## Outline

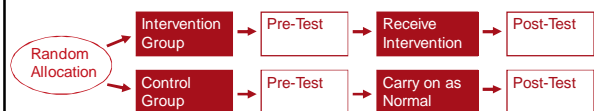
- Evaluating the effectiveness of educational programmes: the role of randomised controlled trials (RCTs)
- Overview of the case study: a RCT evaluation of Business in the Community's "Time to Read" pupil mentoring programme
- Lessons learnt and key challenges

## Evaluating the effectiveness of educational programmes

- The issue of "effectiveness" is only one (albeit important) aspect of any evaluation
- To ascertain effectiveness we need:
  - Clear sense of the desired outcomes
  - Some sense of whether there has been change or not in relation to these outcomes (hence comparisons between outcomes before and after)
  - Some attempt to disentangle effects of the programme with other potential effects (hence comparison/control group)
  - Sufficient samples to help generalise (hence quantitative methods)

## Evaluating the effectiveness of educational programmes

- Hence the randomised controlled trial (RCT):



## Case study: evaluation of the "Time to Read" pupil mentoring programme

- Run by Business in the Community and aimed at children aged 8-11 (Key Stage 2)
- Adults from local businesses visit schools and listen to two children read individually for half an hour each per week
- Been running for 10 years and now runs in more than 130 primary schools with over 1,000 children and supported by 120 local companies
- More information on the programme at: <http://www.timetoni.com/>

## Case study: evaluation of the "Time to Read" pupil mentoring programme

- Nature of the evaluation, including design and choice of measures, pre-specified by Business in the Community following expert advice
- RCT covered two school years and focused on following outcomes:
  - Self-esteem (and later, locus of control)
  - Enjoyment of learning
  - Reading skills
  - Aspirations for the future

### Case study: evaluation of the "Time to Read" pupil mentoring programme

- RCT ran from September 2006 to June 2008
- Involved 734 children from 50 schools across Northern Ireland
- 360 randomly allocated to the Time to Read programme and 374 to the control group
- Repeated measures design (6 sweeps of data collection); data analysed using multilevel modelling (data sweeps nested in pupils nested in schools)
- Qualitative element running alongside the trial

### Case study: evaluation of the "Time to Read" pupil mentoring programme

- Qualitative data suggested strong support for the programme among mentors, teachers and children and strong belief that it is effective
- The RCT found evidence of a small positive effect in relation to increased aspirations for future (ES=+.17) but no evidence of any effects in relation to other outcomes

### Case study: evaluation of the "Time to Read" pupil mentoring programme

Outcome	Sweep 1 Scores			Change per Sweep	Significance of Change	Effect Size (2 Years)
	Min. & Max	Mean Score	Std. Dev.			
Aspirations	10 - 25	22.56	2.38	+0.08	p=0.032	+0.17
Enjoyment	9 - 45	33.88	6.99	-0.13	p=0.144	-
Self-Esteem	6 - 24	18.58	4.27	-0.04	p=0.542	-
Locus of Control	7 - 24	14.97	3.11	-0.03	p=0.700	-
Reading Score	81 - 99	92.03	4.77	0.00	p=0.983	-

### Lessons learnt and key challenges

Case study illustrates the importance of:

- The limits to generalisation (re: outcome- and context-specific)
- The centrality of the outcomes used to the validity of the evaluation (problem in this case study with the use of general rather than domain-specific outcomes)
- Theory and evidence in programme development and the selection of outcomes (use of logic models)
- Qualitative studies to compliment the findings of the RCT
- Working in close partnership with key stakeholders, including the children