

Including Comparator Groups in HEAT's Tracking Reports

Anna Anthony, Senior Data Analyst

1. What is a comparator group and why we do we need it?
2. What types of comparator group are there?
3. How can I collect data for a comparator group?
 - Discussion on practicalities of collecting data for a comparator group
4. How can HEAT help users access outcome data for a comparator group? A Case Study with Make Happen
 - Q&A time

What is a comparator group?

Participant Group

Take part in
outreach activity



what happened

Comparator Group

Do not take part in
outreach activity



*what would
have happened*

Type 1	Narrative
Type 2	Empirical Enquiry
Type 3	Causality

Independent research

Standards of evidence and evaluating impact of outreach

It is important that higher learning from evidence ab equitable access make

prioritise generating, sharing and higher education more

Related publications

“For strong Type 2 and for all Type 3 evaluations, you want to have a counterfactual or comparator to establish the impact of your intervention or activity above what might otherwise have occurred”. (OfS, 2019)

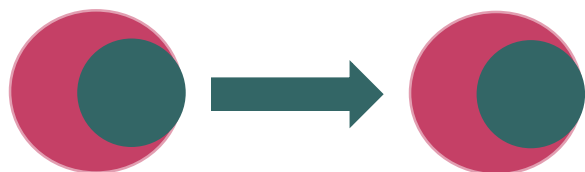
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Source: OfS website

Types of comparator group - Theory

Type 2

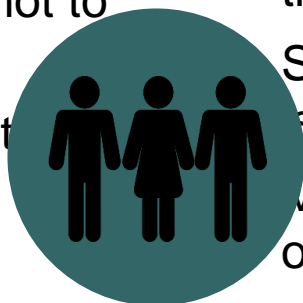
Non-experimental designs



- Measures outcomes
- Compares with wider population
- Comparator group tends not to consider selection bias
- May under or over-estimate effect of participation

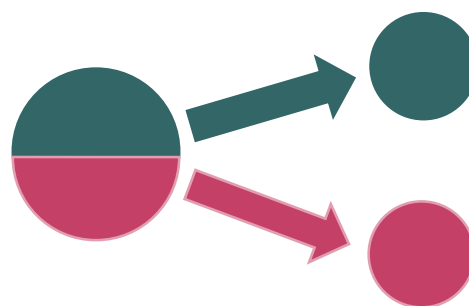
Participant Group

Take part in outreach activity



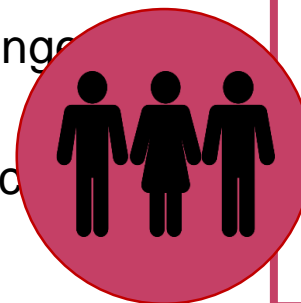
Type 3

Experimental designs



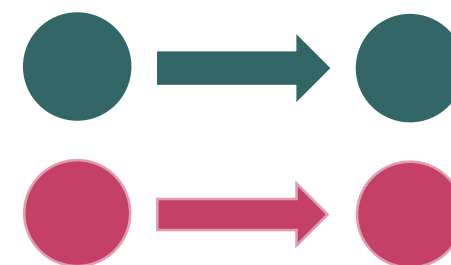
Comparator Group

Do not take part in outreach activity



- RCTs – championed by 'What Works' Centres
- Identifies a 'control' group through randomisation
- Selection bias no longer an issue
- May be difficult to achieve in outreach context

Quasi-experimental designs



- Identifies a suitable comparator group
- Matching techniques e.g. PSM
- Success will depend on the quality of matched 'confounding' variables
- Can remove some elements of selection bias

Example 1 Over-subscribed Activities e.g. Summer Schools

- Collect personal data and permissions for tracking for all applicants via application form
 - May be able to randomly allocate students to treatment and 'control' groups
 - Alternatively, match successful and unsuccessful applicants based on confounding variables
- + Levels of 'motivation' *should* be similar across both groups

Example 2 Activities delivered to certain students within a class e.g. Mentoring

- If possible, baseline entire class to collect personal data and permissions for tracking
 - Match participants with non-participants on confounding variables
- + Both groups will have received the same teaching and so this important variable is accounted for
- Levels of 'motivation' between the two groups may be different depending on how students were selected

Example 3 Activities delivered to an entire class e.g. Skills and Attainment

- If possible, baseline another class in the same year group in the school to collect personal data for and permissions tracking
- Match participants with non-participants (from different class) on confounding variables
- + Both groups attend the same school, controlling for learning environment to some extent
- Teaching quality between the two classes may be different, and this may influence the outcomes being examined
- + Differing motivation less of an issue for activities delivered to entire classes

Example 4 Intensive outreach with an entire year group

- It may be possible to collect personal data and permission for tracking from students in a different but similar school to use as a comparator
- A 'similar school' can be identified using the EEF's Family of Schools tool
- Data collection for these students may be possible if you offer less intensive outreach in that school
- Match participants from different schools on confounding variables
- Teaching quality and school context between the two classes is likely to be different, and this may influence the outcomes being examined
- + Differing motivation less of an issue for activities delivered to entire year groups

Have you collected data for a comparator group in the past?

- 1. Yes**
- 2. No**

How likely are you to try and collect data for a comparator group in the future?

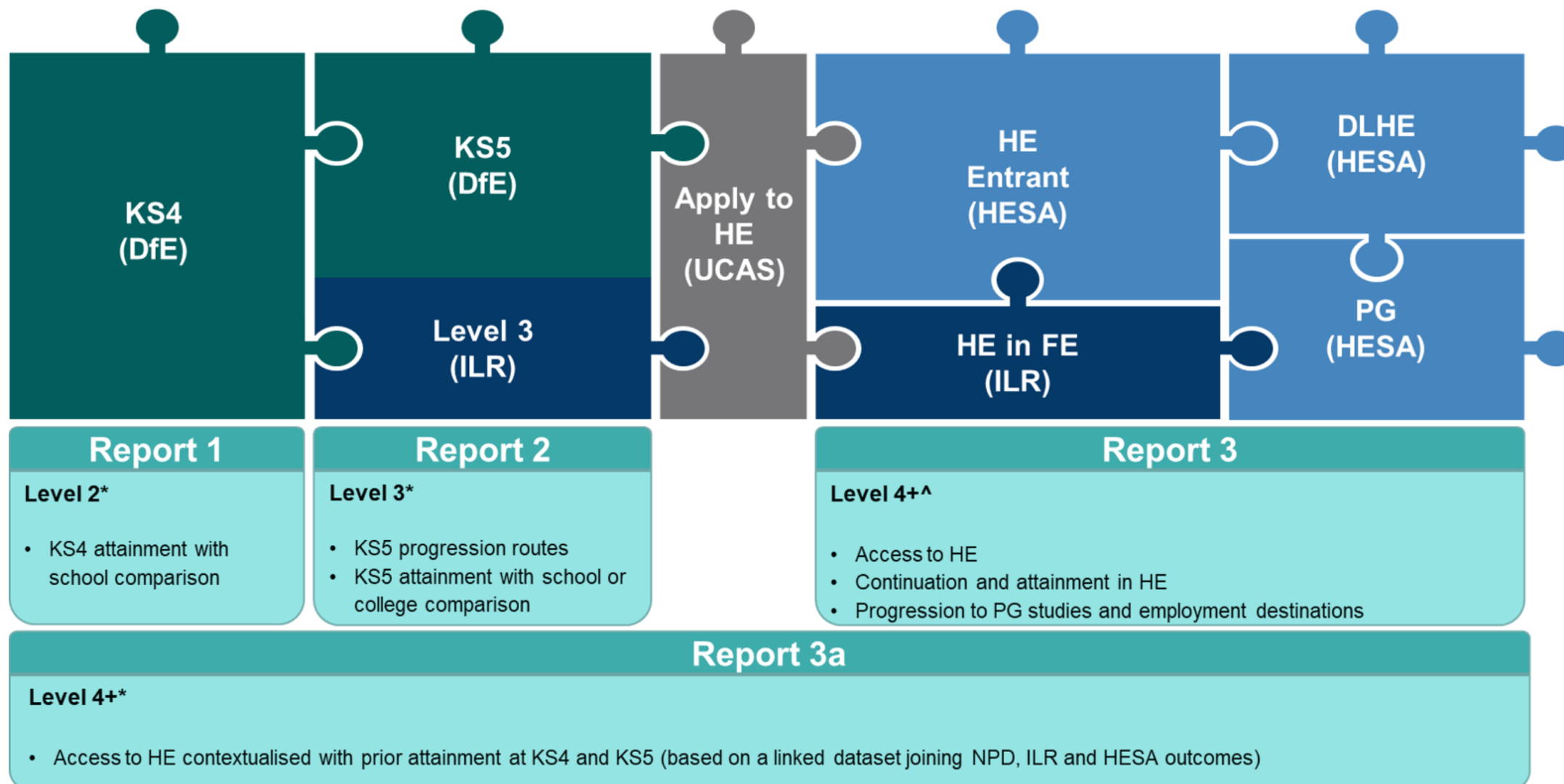
- 1. Likely**
- 2. Not sure**
- 3. Unlikely**

Do you have any concerns about collecting data for a comparator group?

How can HEAT help users access outcome data for a comparator group?

A case study with Make Happen

Key Stage 4 Attainment Tracking



**underlying dataset not available; ^underlying dataset available, format dependent on legal basis*

- Performance in exams is measured using three metrics
 1. Percentage of participants awarded English and Maths at GCSE with a strong 9-5 pass
 2. Participants' average Attainment 8 Scores
 3. Participants' Progress 8 Scores
- School average as comparator group – Type 2

A Practical Example with Make Happen

Make Happen's Activity run by Positively Mad

Activity Type: Skills and Attainment

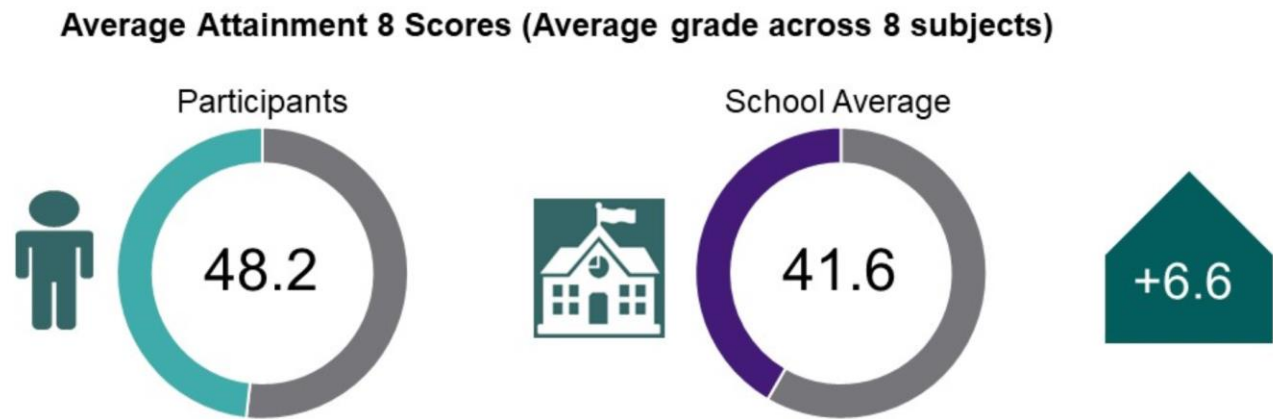
Positively Mad run whole day workshops in schools focusing on exam and revision skills

Number of participants: 130



Positively Mad Participants

Higher Attainment 8 Scores for all prior attainment bands when compared with their School Average



Average Attainment 8 Scores for low/average/high achievement band at KS2

	Participants	School Average	Difference
Low KS2 Attainment (<L4)	28.2	23.6	+4.5
Medium KS2 Attainment (L4)	44.3	38.8	+5.5
High KS2 Attainment (>L4)	58.4	55.7	+2.7

NB This means that on average medium attaining participants achieved an average of 5.5 grades higher when compared with pupils with similar attainment from their schools

Limitations

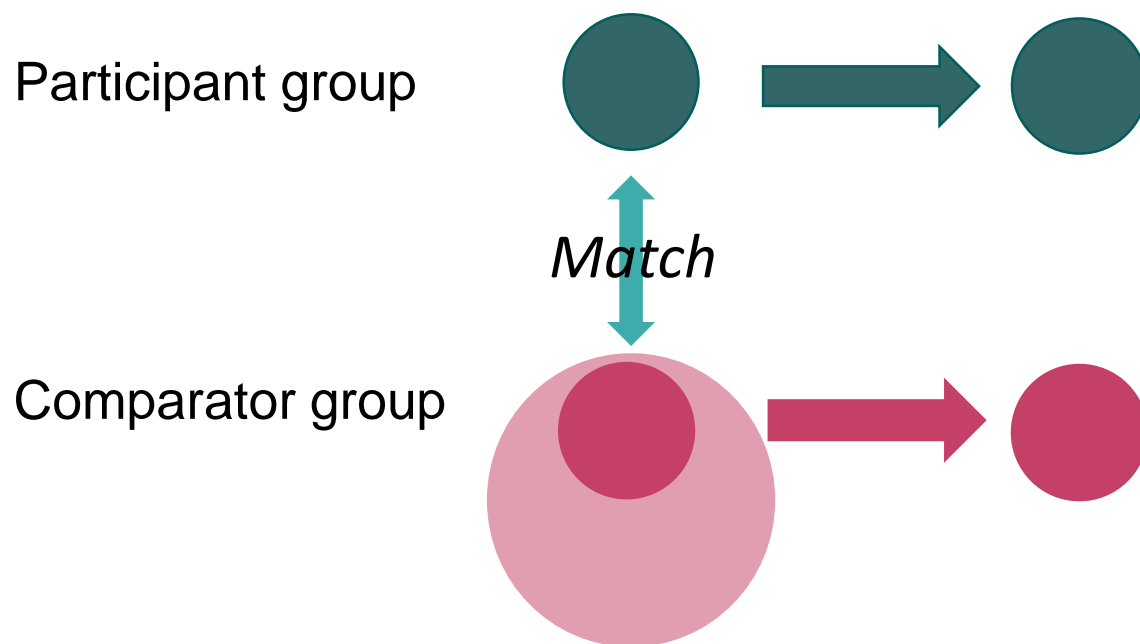
The School Average may not be a suitable comparator

- Participants may/may not be similar to their classmates.
- Current reports breaks down by prior attainment at KS2, making this strong Type 2 evidence
- However, activities may be targeted towards individuals

Must find a more suitable comparator group

- Make Happen had baselined entire year groups, including non-participants
- Case Control Matching was conducted in SPSS to find a 'non-participant' pair for each Positively Mad participant
- A quasi-experimental approach (not experimental)

Case Control Matching (Type 3)



- Conducted in SPSS
- Guides available online

Factors used in matching:

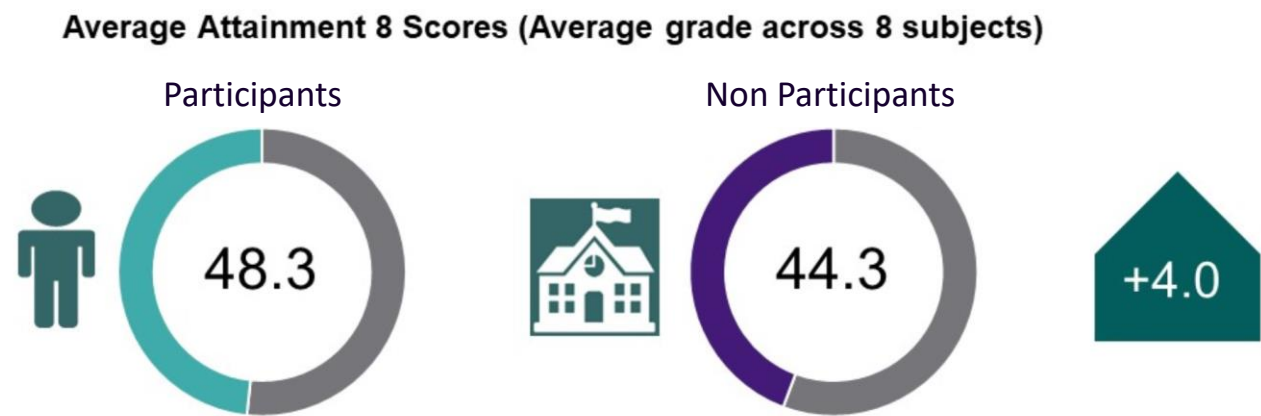
- IMD Quintile
- IDACI Quintile
- Gender
- Ethnicity
- KS4 Performance of School (Quintile)
- Uni Connect Target Ward (Y/N)

Tips:

- Set a low calliper = Groups very similar in composition
- Check balance of groups before and after matching
- Limitation = only able to match on observed variables (not motivation)

Match Group Results

Higher Attainment 8 Scores for all prior attainment bands when compared with their a matched comparator group



Average Attainment 8 Scores for low/average/high achievement band at KS2

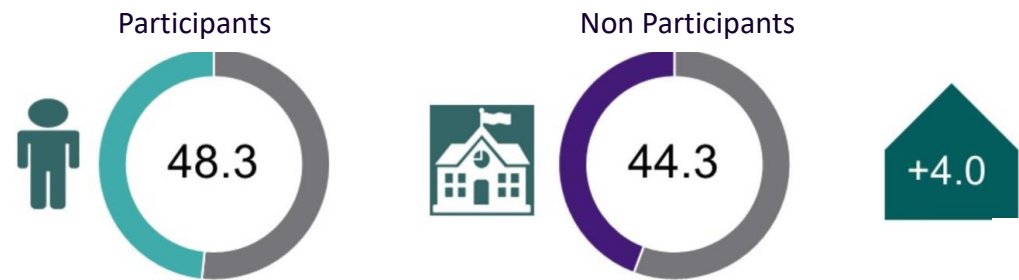
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High KS2 Attainment (>L4)	59.0	54.0	+5.0

NB This means that on average medium attaining participants achieved an average of 4.4 grades higher when compared with pupils with similar attainment from their schools

Match Group Vs School Average Results

Results Matched Comparator Group Vs. School Average

Average Attainment 8 Scores (Average grade across 8 subjects)



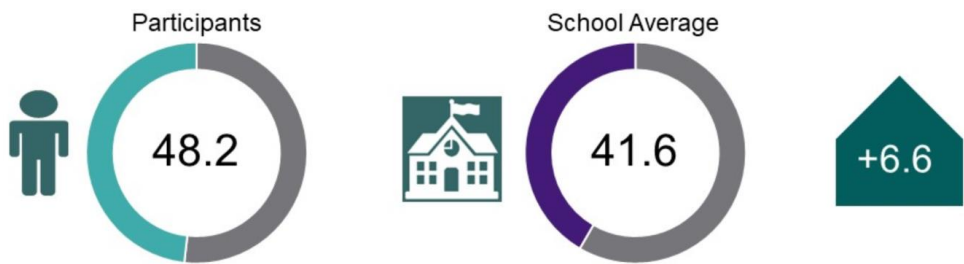
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Positively Mad Participants' Attainment 8 Scores compared with the Non-Participants' Scores

Average Attainment 8 Scores (Average grade across 8 subjects)



Average Attainment 8 Scores for low/average/high achievement band at KS2

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Positively Mad Participants' Attainment 8 Scores compared with the School Average

Contact Us

Requests for support (HEAT Helpdesk)
support@heat.ac.uk

Anna Anthony, Senior Data Analyst
Anna.anthony@heat.ac.uk