

# KEEP Teaching is a programme that aims to improve the job satisfaction of physics newly qualified teachers by increasing their time teaching physics

<b>Submission date</b> 08/09/2023	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 25/09/2023	<b>Overall study status</b> Completed	<input checked="" type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 21/01/2025	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

KEEP Teaching is a programme that aims to improve the job satisfaction of Newly Qualified Teachers (NQTs) of physics by increasing the proportion of time they spend teaching physics. Guidance materials are provided to schools based on an initial assessment of their timetabling processes with an aim to increase the amount of time these NQTs spend teaching physics.

### Who can participate?

Adult physics NQTs aged between 18 and 65 years old working at non-selective state schools in England

### What does the study involve?

The unit of analysis is a school-NQT pairing. A pairing randomised to receive the programme will receive an email offering timetabling guidance. These materials may include guidance, example timetables and direct feedback upon timetables. All NQTs will complete a survey towards the end of their NQT year, which will include a series of questions that will allow us to create a validated measure of job satisfaction.

### What are the possible benefits and risks of participating?

The possible benefits of participation are improved job satisfaction for NQTs and improved teacher retention for schools. No risks associated with participating are foreseen. Schools and NQTs can withdraw from the study at any time.

### Where is the study run from?

The evaluation is being carried out by the University College London (UCL) Institute of Education (IOE) (UK). The KEEP Teaching programme is designed and delivered by the Institute of Physics (IOP) (UK)

When is the study starting and how long is it expected to run for?  
June 2018 to June 2023

Who is funding the study?  
The Education Endowment Foundation (UK)

Who is the main contact?  
David Wilkinson, d.wilkinson@ucl.ac.uk (UK)

## Contact information

**Type(s)**  
Principal investigator

**Contact name**  
Mr David Wilkinson

**ORCID ID**  
<https://orcid.org/0000-0001-5934-3540>

**Contact details**  
UCL Institute of Education  
20 Bedford Way  
London  
United Kingdom  
WC1H 0AL  
+44(0)2076126211  
d.wilkinson@ucl.ac.uk

**Type(s)**  
Scientific

**Contact name**  
Mr David Wilkinson

**Contact details**  
UCL Institute of Education  
20 Bedford Way  
London  
United Kingdom  
WC1H 0AL  
+44(0)2076126211  
d.wilkinson@ucl.ac.uk

**Type(s)**  
Public

**Contact name**  
Mr David Wilkinson

## Contact details

UCL Institute of Education  
20 Bedford Way  
London  
United Kingdom  
WC1H 0AL  
+44(0)2076126211  
d.wilkinson@ucl.ac.uk

## Additional identifiers

## Study information

### Scientific Title

A randomised trial of whether KEEP Teaching, an intervention designed to increase the proportion of time that Physics Newly Qualified Teachers spend teaching Physics, improves their job satisfaction.

### Acronym

KEEP Teaching

### Study objectives

1. What is the size of the effect of the KEEP Teaching intervention on the job satisfaction of physics NQTs towards the end of their NQT year?
2. What is the size of the effect of the KEEP Teaching intervention on the retention within the teaching profession of physics NQTs three years after starting their NQT year at that school, compared to a business-as-usual control?
3. What is the size of the effect of the KEEP Teaching intervention on the retention within a school of physics NQTs three years after starting their NQT year at that school, compared to a business-as-usual control?
4. What is the association between the extent of 'matchedness' and job satisfaction, as well as 'matchedness' and teacher retention?

### Ethics approval required

Ethics approval required

### Ethics approval(s)

approved 13/06/2019, UCL Institute of Education Research Ethics Committee (20 Bedford Way, London, WC1H 0AL, United Kingdom; None provided; ioe.researchethics@ucl.ac.uk), ref: Z6364106 2019 05 102

### Study design

Two-arm randomized controlled trial with school (teacher)-level allocation

### Primary study design

Interventional

### Study type(s)

Quality of life

## **Health condition(s) or problem(s) studied**

Physics teacher job satisfaction

## **Interventions**

The unit of analysis for this trial will be non-selective state schools within England that have recruited a physics NQT. For the purposes of this project, a physics NQT is defined as someone with a physics or 'maths with physics' degree or mechanical, civil or electrical engineering degree; and/or someone with a physics or physics and maths Postgraduate Certificate in Education (PGCE) (or Qualified Teacher Status (QTS)-equivalent teaching certificate labelled as specialising in physics or physics and maths). Tailored guidance materials are provided to schools based on an initial assessment of their timetabling processes. These materials may include guidance, example timetables and direct feedback upon timetables.

Once a matched pair of physics NQT and eligible schools are allocated to a trial condition, the Institute of Physics (IOP) team will offer guidance to promote 'matchedness' of the timetable for the physics NQT, if they are a treatment school. A timetable is more matched if the physics NQT has a greater proportion of their lessons in physics. Once a draft timetable is produced, this will be shared with the IOP who may repeat the cycle of guidance and provide feedback to maximise 'matchedness'.

Schools will be recruited into the trial over the course of three years with a target of 60 to 70 schools per year. Schools will be randomly allocated to treatment or control as soon as they join the trial using sequential treatment allocation, to maximise the amount of time the implementation team have to work with schools before schools finalise their timetable.

To allow sequential treatment allocation while also ensuring equal-size treatment and control groups, the following method will be adopted for randomisation:

1. A dataset is generated with two hundred rows labelled 1, 2, 3... 200.
2. Flip a coin (using the computer) for row 1. Row 1 is assigned to treatment if it is heads, or to control if it is tails.
3. The process repeats for the following 199 rows.
4. The number of heads is checked. If the number of heads is not 100, steps 1-4 are repeated until a dataset with exactly 100 heads is generated.
5. The first school recruited to the trial is assigned to treatment if row 1 is a treatment row, or to control if row 1 is a control row.
6. The process is repeated in step 5 for the next 199 schools recruited to the trial.

Sequential allocation is sometimes critiqued because it can introduce biases when the recruiter knows what the next allocation will be. In this study, this approach is acceptable because the evaluation team will conduct the randomisation and the recruiter will not know what the next allocation will be. The randomisation process will be recorded in the syntax and log files used to carry out the randomisation and included as an appendix in the evaluation report.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

NQT job satisfaction measured using a short online survey in the summer term of the NQT year

## **Key secondary outcome(s)**

The following secondary outcome measures will be measured by matching the NQTs to the School Workforce Census for the three years following their NQT year:

1. NQT retention in the profession - whether the NQT remains in the teaching profession in the state sector
2. NQT retention in school - whether the NQT remains in the same school as they were for their NQT year

**Completion date**

01/06/2023

## Eligibility

**Key inclusion criteria**

The unit of analysis for this trial will be non-selective state schools within England that have recruited a physics NQT.

For the purposes of this project, a physics NQT is defined as:

1. Having a physics or 'maths with physics' degree or a mechanical, civil or electrical engineering degree  
AND/OR
2. A physics or physics and maths Postgraduate Certificate in Education (PGCE) (or QTS-equivalent teaching certificate labelled as specialising in physics or physics and maths)

**Participant type(s)**

Employee

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

65 years

**Sex**

All

**Total final enrolment**

227

**Key exclusion criteria**

1. Not participated in a requisite training course
2. Not agreed to Memorandum of Understanding

**Date of first enrolment**

14/06/2019

**Date of final enrolment**

31/05/2022

## Locations

### Countries of recruitment

United Kingdom

England

### Study participating centre

**UCL Institute of Education**

20 Bedford Way

London

United Kingdom

WC1H 0AL

## Sponsor information

### Organisation

Education Endowment Foundation

### ROR

<https://ror.org/03bhd6288>

## Funder(s)

### Funder type

Charity

### Funder Name

Education Endowment Foundation

### Alternative Name(s)

EducEndowFoundn, The Education Endowment Foundation (EEF), Education Endowment Foundation | London, EEF

### Funding Body Type

Private sector organisation

### Funding Body Subtype

Trusts, charities, foundations (both public and private)

## Location

United Kingdom

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be stored in the non-publicly available EEF data repository

### IPD sharing plan summary

Stored in non-publicly available repository

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Funder report results</a>		01/08/2024	21/01/2025	No	No
<a href="#">Protocol file</a>	version 2.0	07/02/2022	11/09/2023	No	No
<a href="#">Statistical Analysis Plan</a>	version 1.0	16/02/2023	11/09/2023	No	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes