



EEF EVIDENCE DATABASE CODING GUIDE

MAIN DATA EXTRACTION

VERSION 2.0

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About this guide: This guide was created by a team at Durham University for the Education Endowment Foundation's (EEF) Education Database Project to update their Teaching & Learning Toolkit.

Those involved in developing the guide were: Dr Emma Dobson, Dr Berenice Villanueva-Aguilera, and Professor Steve Higgins, with thanks to other members of the team for providing feedback during its development.



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Main Data Extraction

Coding Guide

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Main Data Extraction

Coding Guide

This guide provides information about how to use EPPI Reviewer to code studies contained within the EEF Education Evidence Database. Whilst a description of each code can be found within its code-set in EPPI Reviewer, it is sometimes necessary to expand upon these definitions to help support data extraction of a particularly tricky source.

The guide gives examples and notes to assist with the Main Data Extraction (MDE) coding process, which is outlined step-by-step. This guide should be used in conjunction with the coding process in EPPI Reviewer to ensure that you have completed each stage correctly. It should be your first source of help/advice if you are unsure about how to extract and/or record data from a study. If you are still unsure after reading the coding guide, please refer to the troubleshooting flow diagram provided at the end of this document or the relevant channel on the EEF Education Database Slack forum.

01. Introduction to Data Extraction

The Introduction section (pp. 5-9) provides information on how to enter codes into EPPI Reviewer, how to use the coding guide and pre-coding checks that should be conducted before starting the coding process.

02. Main Data Extraction Coding Guide

The Main Data Extraction Coding Guide (pp. 10-36) outlines each stage of the MDE coding process. Each code within this code-set is listed alongside a descriptor. In addition, icons to indicate how this data should be captured are provided, as well as examples of what this data could/should look like.

03. Further Information

The Further Information section (pp. 37-41) provides additional guidance that may be needed to support the coding process. This includes a chart to convert reported school grade/year of participants into age in years and codes that have been identified as frequently causing disagreement between coders during the double-coding 'check' process. There is also a page that signposts resources and contact information for troubleshooting purposes.

How to code in EPPI Reviewer

There are three ways to extract data and add codes to records held within EPPI:

- 1. Selecting or ticking the code checkboxes
- 2. Highlighting information in the source PDF file and assigning a code
- 3. Typing in the 'Info' box next to the code

Ticking the code checkbox

You should use the code checkboxes when:

- A short response is required and the provision of additional detail is unnecessary e.g. when coding for country
- The source PDF file cannot be highlighted. In this instance, text that should have been highlighted will need to be typed out into the 'Info' box along with the source page number.

Highlighting information in the source PDF file and assigning a code

You should highlight text in the source PDF file and assign a code when:

 More detail is required than can be captured by a checkbox response e.g. when providing a description of an intervention

Typing in the 'Info' Box

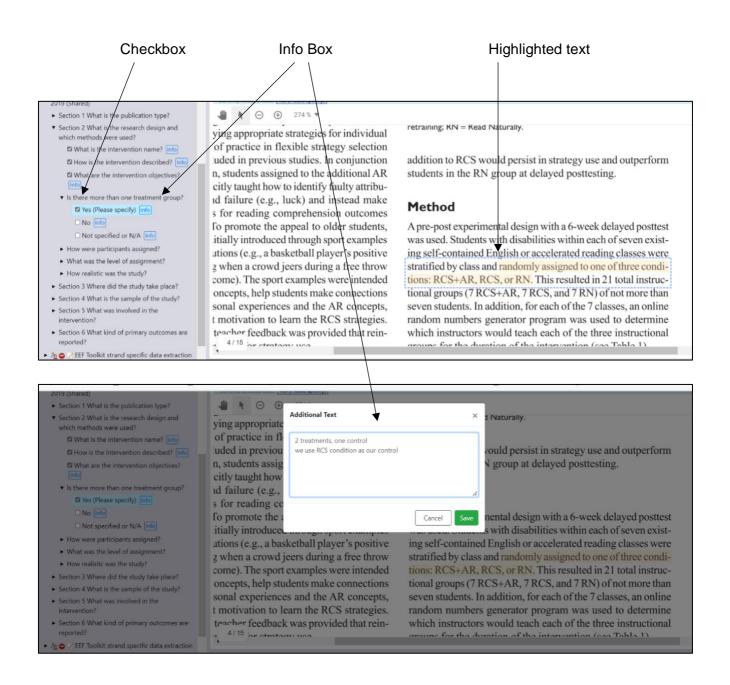
You should type in the 'Info' box when:

- The source PDF file cannot be highlighted (post on the #problematicPDFs Slack channel first to request an accessible/highlightable source PDF file be uploaded to EPPI). If a highlightable source cannot be provided, text that should have been highlighted will need to be typed out into the 'Info' box along with the source page number
- Where numeric data is required

Should you encounter a software-based problem whilst using EPPI Reviewer (e.g. crashing, log-in failure), please contact the EPPI Support Team at: EPPISupport@ucl.ac.uk

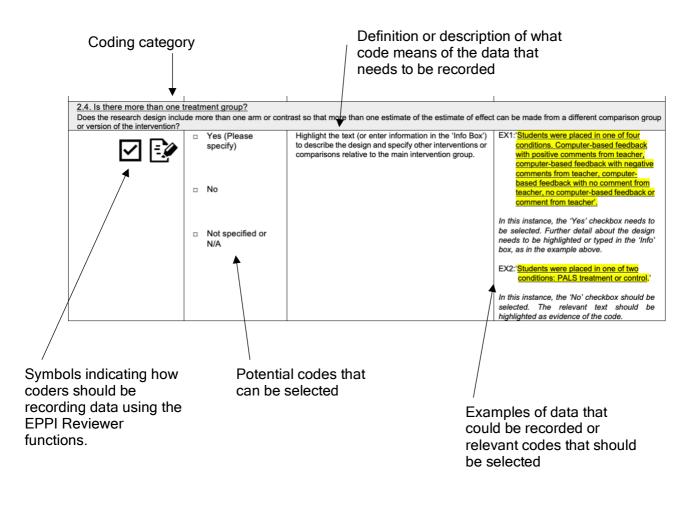
Example coding in EPPI Reviewer

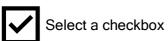
Example Question: Is there more than one treatment group?

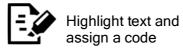


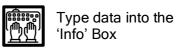
How to use the MDE Coding Guide

This guide is to be used in conjunction with coding in EPPI Reviewer to ensure that each stage of the coding process has been completed and accurate information has been recorded. This coding guide provides a step-by-step outline of the Main Data Extraction (MDE) code-set. Each section of the code-set is presented along with potential codes that can be selected, a definition of the meaning of these codes, and an example of the data used to support coders' choice of appropriate code. Below is an excerpt from the coding guide with explanations regarding how to use this when coding.









Pre-coding checks

Once you have been allocated a study to be data extracted/coded, you can view its record in EPPI Reviewer. Before you open the attached PDF source file and begin coding, you should undertake the following initial checks:

- 1. Does the title of the PDF match the record of the study in EPPI Reviewer?
- 2. Can you read and highlight the text?
- 3. Does the text make sense?
- 4. Have more specific instructions for data extraction been provided?

Does the PDF title match the study record?

If the title of the study reported in the attached source PDF file does not match the record in EPPI Reviewer, please contact a member of the project team on Slack (#problematicPDFs).

Can you read and highlight the PDF file?

Some of the attached PDF source files in EPPI Reviewer have been photocopied from bound journals or theses. As a result, the legibility of these files can be poor. If a file is difficult to read or highlight, please contact a member of the project team on Slack (#problematicPDFs).

If a file is a particularly large document, it may have been split into multiple files. These will be ordered numerically e.g. Anderson_1984_PDF1, Anderson_1984_PDF2. Read the files in numerical order and code each PDF separately as you work through the coding process.

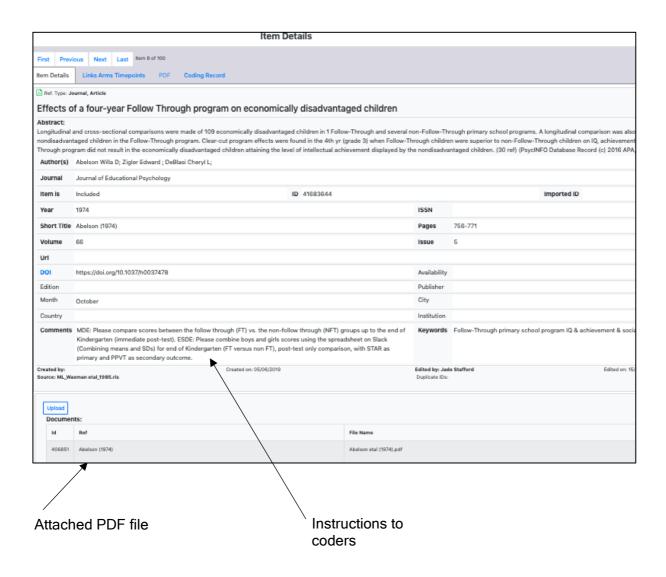
Does the text make sense?

To facilitate coding, some sources have been processed using Optical Character Recognition (OCR). This will have been noted in the 'Comments' section of the study record in EPPI. If there are errors in the OCR process that are preventing legibility/understanding, please contact a member of the project team on Slack (#problematicPDFs).

Are there more specific instructions for data extraction?

Always check the 'Comments' section of the study record in EPPI. This may contain important information about the study which has implications for coding. For example, some sources might report multiple outcomes for multiple studies within a single report. If this is the case, guidance will be provided in the 'Comments' section of the

source record (Citation details window) in EPPI. The guidance will identify which outcomes/studies should be coded and which should be ignored.



If you are not sure what data to extract from a study, please contact a member of the project team on Slack (#coding_problems), with the name of the study, internal ID number and Toolkit strand you are data extracting for.

Section 1

What is the publication type?

In Section 1 you will need to identify whether a source is a:

- Journal article
- Dissertation or thesis
- Technical report
- Book or book chapter
- Conference paper
- Other

This section largely requires coders to tick the applicable coding checkbox.





| Question | Applicable Codes | Definition | Example |
|------------------------------|--------------------------|---|---|
| SECTION 1: What is the p | • • | | |
| 1.1. What is the publication | n type? | | |
| $\overline{\checkmark}$ | □ Journal Article | A report published in a peer-reviewed journal with an ISSN. | Once a checkbox has been selected, no further action/coding is required in response to this question. |
| | □ Dissertation of thesis | A report of a study in a dissertation or thesis submitted as all or part of the assessment for a higher degree. | Once a checkbox has been selected, no further action/coding is required in response to this question. |
| | □ Technical rep | ort An unpublished report, technical report or document providing details of a research study or studies without an ISSN or ISBN. (NB: EEF Evaluations are classified as technical reports). | Once a checkbox has been selected, no further action/coding is required in response to this question. |
| | □ Book or book chapter | A report of a research study published in a book or book chapter with an ISBN. | Once a checkbox has been selected, no further action/coding is required in response to this question. |
| | □ Conference paper | A report of a study presented at a research conference and subsequently made more widely available. (NB: Peer-reviewed conference proceedings with an ISBN should still be classified as conference papers). | Once a checkbox has been selected, no further action/coding is required in response to this question. |
| | □ Other (Please specify) | A report not classifiable according to the categories above (e.g. a website). Please add further detail in the 'Info' box. | Once this checkbox has been selected, please add further information to the 'Info' Box'. |

Section 2

What is the research design and which methods were used?

In Section 2 you will need to provide information about:

- Intervention name
- Intervention description
- Intervention objectives
- Comparison groups
- Participant assignment
- Assignment level
- Ecological validity

This section requires coders to tick applicable coding checkboxes AND highlight relevant text to apply codes.





| Question | Applicable Codes | Definition | Example |
|---------------------------------|---|--|---|
| SECTION 2: What is the r | esearch design and whic | ch methods were used? | |
| 2.1. What is the intervention | name? | | |
| | Highlight relevant text and code | Provide the name of the intervention, programme or approach as given in the report. | 'The purpose of this study was to implement and evaluate the effectiveness of the Peer Assisted Learning Strategies (PALS) supplemental reading program to determine if there was an increase in sixth grade students' reading comprehension, oral fluency, and attitude toward reading, specifically when reading nonfiction text.' It is enough here to simply highlight the programme or intervention name as above. No further action/coding is needed in response to this question. Do not code the title of the study as the intervention name. |
| 2.2. How is the intervention of | described? | | |
| | Highlight relevant text and select the code | Provide a brief summary of the intervention as provided in the report. Please include the rationale for impact on learning if given. | 'The research comprised multiple intervention stages. 1). Remedial teachers (participants) were asked to conduct a systematic intentional inquiry into their approach to formative assessment. Using an online bulletin board to reflect on their beliefs and assumptions which inform their practice, they were encouraged to experiment with formative assessment in their respective teaching contexts. 2). Participants met eight times throughout the year to discuss the intervention; sharing their insights, strategies and beliefs. 3). The research director observed participants in their daily classroom work and examine samples of students' work.' |

| | objectives? Highlight relevant text and code | Please provide the specific objectives or aims of the intervention, programme or approach as provided in the report. | 'The purpose of this study was to implement and evaluate the effectiveness of the Peer Assisted Learning Strategies (PALS) supplemental reading program to determine if there was an increase in sixth grade students' reading comprehension, oral fluency, and attitude toward reading, specifically when reading nonfiction text.' This should be the stated objective of the study, please don't code the research questions as the intervention objectives. |
|--|---|--|--|
| 2.4. Is there more than one trea | atment group? | | |
| Does the research design include or version of the intervention? | more than one arm or cont | rast so that more than one estimate of the estimate of effec | t can be made from a different comparison group |
| | Yes (Please specify)No | Highlight the text (or enter information in the 'Info Box') to describe the design and specify other interventions or comparisons relative to the main intervention group. | EX1: Students were placed in one of four conditions. Computer-based feedback with positive comments from teacher, computer-based feedback with negative comments from teacher, computer-based feedback with no comment from teacher, no computer-based feedback or comment from teacher. |
| | Not specified or N/A | | In this instance, the 'Yes' checkbox needs to be selected. Further detail about the design needs to be highlighted or typed in the 'Info' box, as in the example above. |
| | | | EX2: Students were placed in one of two conditions: PALS treatment or control. In this instance, the 'No' checkbox should be |
| | | | selected. The relevant text should be highlighted as evidence of the code. |

2.5. How were participants allocated?

How were the participants assigned or allocated to their group (i.e. treatment and control)?



| □ Random allocation (please specify) | Select this code where the report describes the participants' allocation to their group as random or pseudo-random (computer generated). Please highlight the text or add information to the 'Info Box' about the randomisation details. |
|--|--|
| Non-random but matched | No randomisation, but matched at allocation prospectively to balance on attainment (or on attainment and other variables). |
| Non-random, not matched prior to treatment | No random allocation and not matched prior to treatment. The nature and extent of any group differences in attainment at baseline is described and then accounted for in the analysis of impact (retrospective matching). |
| □ Unclear | Please only select this code if there are no details about control and intervention allocation or if the information is so unclear as to prevent a reasonable inference. |

'Sixty-four children were randomly selected from the group of children who met the selection criteria. These 64 children were then randomly assigned to one of four experimental conditions. Once in the classroom, children were paired randomly in same-gender dyads to serve as instructional partners for one another.'

"This is a quasi-experimental design... Two classrooms, A & B, were randomly assigned to treatment and control."

This would be random assignment/ allocation at class level.

Please be as selective as you can in highlighting the most relevant text to the question.

- Not assigned naturally occurring sample (prospective QED)
 - Retrospective Quasi Experimental Design (QED)
 - Regression discontinuity (e.g. Policy change)

This is where researchers take advantage of a situation where a comparison can be made between groups from changes that either are planned but have not yet happened (prospective) which will give an estimate of the impact of the intervention or approach of interest.

Where an experiment is created from a naturally occurring situation which has already occurred (retrospective) and two groups (or more) are compared to give an estimate of impact

This is a type of design that identifies the causal effects of an intervention or approach by using or assigning a cut-off or threshold above or below which an intervention is evaluated (e.g. policy change where smaller classes are introduced in a district or a test is used to allocate students to additional support). By comparing results close to, but either side of the threshold, it is possible to estimate the effect of the intervention.

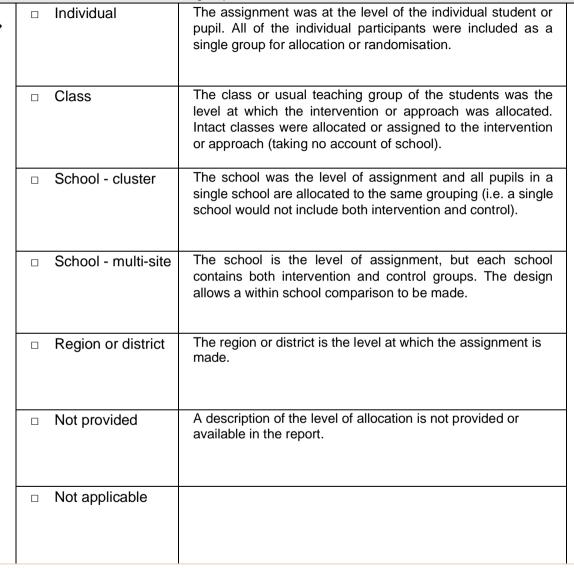
"We can thus identify the impact of these programs by simply comparing students who scored just below and just above the promotional cutoff. For example, if students who missed the cutoff (and were thus required to attend summer school) learned much more than students who just made the cutoff (and thus avoided summer school), then one might conclude that summer school had a positive impact on student achievement."

This is a regression discontinuity design. Most regression discontinuity designs will explicitly describe the method.

2.6. What was the level of allocation?

At which level was the assignment to intervention and control group conducted?





"This is a quasi-experimental design... Two classrooms, A & B, were randomly assigned to treatment and control."

This would be random assignment/ allocation at class level.

2.7. How realistic was the study?

Was the intervention implemented under 'real world' conditions? Factors to consider in assessing the 'ecological validity' include where the intervention took place (usual educational setting for educational approaches of this kind) and who taught or led the intervention with the pupils (did it involve teachers or other educational professionals?)





| High ecological validity | Select this code where the intervention or approach seems realistic for schools or teachers to adopt. Any adaptations to enable the research to be conducted do not appear to affect the validity of the findings and implications for schools. Studies which take place in schools and are taught by the usual teachers or staff have high ecological validity. |
|--------------------------|--|
| Low ecological validity | Select this code where the intervention or approach does not seem realistic or practical for schools or teachers to adopt. Studies which take place in laboratory settings and are only taught by researchers have low ecological validity. |
| Unclear | Select this code where there are no details about where the intervention took place or who was responsible for its delivery and it is not possible to infer sufficient details to make a judgement about the ecological validity of the study. |

'PALS was implemented by classroom teachers for 35-40 minutes, three days a week in addition to students' regular reading program.'

In this example, the 'High ecological validity' checkbox should be selected as the study took place in a school setting and was delivered by a teacher. Please highlight the relevant text or add notes to the 'Info' box.

Section 3

Where did the study take place?

In Section 3, you will need to provide information about:

- The country where the study was conducted
- Specific information about study context
- Specific information about the educational setting

This section requires coders to tick applicable coding checkboxes AND highlight relevant text to apply codes.





| Question | Applicable Codes | Definition | Example |
|-------------------------|--|--|---|
| | did the study take place? | | |
| | nation about the location here the study took place (e.g. city | district, urban, suburban, rural etc.) as provided by the study | |
| | Specific to the location or place | Information about the specific place where the research was undertaken (e.g. name of city, state, or region) | 'This study was conducted at an intermediate school located in a suburban public school district in Western Pennsylvania'. |
| | Information about the type of location | Information about what kind of location (e.g. rural, urban, suburban) | 'This study was conducted at an intermediate school located in a suburban public school district in Western Pennsylvania'. |
| | □ No information provided | Please use this code if there is no further information about the specific location (place name) or the type of location (urban/rural). | |
| 3.2. In which country/o | countries was the study carried o | ut? (Select ALL that apply) | |
| | Select the country or countries that the study was conducted. | Countries which are recognised as sovereign states by the United Nations. If you think there is a country missing, please ask! - For studies based in the UK, expand this code set and select each of the applicable countries e.g. Scotland, Northern Ireland, Wales, England. - The code 'West Indies' is used for Caribbean colonial dependencies. Expand this code set and select each applicable country. - If study takes place in Hong Kong, use Hong Kong code only, NOT China. | 'This study was conducted at an intermediate school located in a suburban public school district in Western Pennsylvania'. In this instance, the 'USA' checkbox needs to be selected. Please highlight the relevant text or add notes to the 'Info' box. |

3.3. What is the educational setting? (Select ALL that apply) What is the type of educational setting that the students attend which is the focus of the intervention or approach? A separate nursery or pre-school setting or a nursery or early years Nurserv class in a primary school. The focus is on the type of setting or school/preschool educational provision. A school for children of normal school age (depending on the Primary/elementary jurisdiction). The focus is on the school type or setting. Pupils will school typically be between ages of 5 and 11. An intermediate school provided in some jurisdictions for Middle school/(Prep) pupils between their primary (or elementary) and secondary educational stages. A school for older pupils, after primary or elementary □ Secondary/high school education (and after middle school where provided). Pupils will usually be between the ages of 11 and 18. A school where pupils reside as well as study; boarding either by Residential/boarding week or over a term. school Independent/private school □ Home A formal educational setting for older secondary pupils. Students Further education/junior will usually be 16 or older, but still studying for school-level, or community college vocational or professional qualifications (i.e. not higher education or leading to a Bachelor's degree) An educational setting which cannot be classified under one of the Other educational setting other definitions. Please provide details of the educational setting (please specify) as given in the study (e.g. field centre, museum classroom, concert or rehearsal hall, public theatre, workplace training etc.) Educational activities taking place outdoors such as Outward Bound Outdoor adventure courses, sailing and kayaking or canoeing, camping, climbing or setting courses based at an outdoor education centre. All studies classified under the Toolkit strand 'Outdoor adventure learning' should be

included. Field studies centres where the activities focus solely on school subjects like Geography or Biology should not be included (please use 'Other' for these and specify the type of setting).

No information provided

Section 4

What is the sample of the study?

In Section 4, you will need to provide information about:

- Overall sample analysed
- Student sex
- Student age
- Student SES/FSM status

This section requires coders to tick applicable coding checkboxes AND highlight relevant text to apply codes AND type numeric information into the 'Info' Box.





| Question | Applicable Codes | Definition | Example |
|--|--|---|--|
| SECTION 4: What is | the sample of the study? | | |
| 4.1. What is the overal | l sample analysed? | | |
| | What is the overall sample analysed? | What is the total number of participants in the data analysed (both intervention and control/comparison)? Please only write a numeric value in the 'Info Box' and highlight additional details on the study PDF. | 'Of the total enrolment of sixth-grade participants (N = 164), there were 132 assigned to the intervention group and 132 assigned to the control condition.' |
| | Other information about the overall sample | If needed (such as where information can't be highlighted), please add notes regarding overall sample size. | Here you would write '164' in the Info box, then highlight as above. |
| 4.2. What is the sex of Please indicate the sex of | | | |
| =_ | □ Female only | | Of the total enrolment of sixth-grade participants (N = 164), there were 77 (47%) male and 87 (53%) female |
| | □ Male only | | students.' Here you would select the |
| | □ Mixed sex | Provide the percentage of female pupils in the study. Please highlight the section or add details of where this can be found in the report. | 'Mixed sex' checkbox, then highlight as above. |
| | □ No information provided | Toport. | Data in the info box should be a percentage of female pupils for the overall sample T & C (do not write the percentage sign) |
| 4.3. What is the age of | the students? (Select ALL that | apply) | |
| | Select all ages of study participants | Please provide additional information if available (e.g. grade level(s), mean age, or mean and standard deviation) in the 'Info' box. Coders can use the indicative age per grade from p.35 of this guide. In cases | 'This study included 164 sixth-grade students, ages 11-13.' |
| | | where interventions last more than a year, please report the ages of children when they started the intervention. | Here you would select checkboxes for '11', '12' and '13'. No further |

| | | Select 'No Information Provided' if no information indicating the students' age can be found in the study. | action/coding is required in response to this question. |
|--------------|--|---|---|
| | ion of low SES/FSM students in | | |
| | | hool meals (FSM) or reduced price lunches or are identified as being froughter details as reported in the study. | om a low socio-economic status? If |
| | □ FSM or low SES student percentage | Please add the percentage of pupils in the sample who are receiving free school meals (FSM) or reduced price lunches or are identified as being from a low socio-economic status background. | Information entered into the 'Info Box' must only contain the percentage for the overall sample (only numerical digits, no |
| =_ | Further information about FSM or SES in study sample | Please highlight any details provided in the study about the socio- economic status of the students involved in the research (such as eligibility for free or reduced price school meals or lunches). | symbols) |
| \checkmark | □ No FSM/SES information provided | Select this option if there is no information about the socio-economic status of the students involved in the research (such as eligibility for free or reduced price school meals or lunches). | |

Section 5

What was involved in the intervention?

In Section 5, you will need to provide information about:

- Organisation responsible for intervention implementation
- Intervention training
- Intervention focus
- Intervention teaching approach
- Use of digital technology/parents/volunteers
- Intervention scheduling
- Intervention deliverer
- Intervention duration
- Intervention frequency
- Intervention session length
- Intervention detail/fidelity
- Intervention cost
- Intervention outcome evaluator

This section requires coders to tick applicable coding checkboxes AND highlight relevant text to apply codes AND type numeric information into the 'Info' Box.





| Question | Applicable Codes | Definition | Example |
|-------------------------|---|---|---------|
| SECTION 5: What | was involved in the intervention | on? | |
| | anisation was responsible for pr | | |
| Please indicate what ki | | for the provision or management and organisation of the intervention. | |
| | □ School or group of schools | Check the appropriate box for the type of organization responsible for the intervention. If there was a separate, independent evaluation, focus on the delivery of the intervention, not the evaluator. | |
| | Charity or voluntary organisation | | |
| | □ University/researcher | | |
| | □ Local education authority or district | Local education authority or district (government or public funding) | |
| | Private or commercial company | | |
| | Other (please provide details) | | |
| | | | |
| | | | |

| E 2 Was training for th | e intervention provided? | | |
|----------------------------|---|--|---|
| J.Z. Was training for the | □ Yes □ Unclear/Not specified | Was training provided to the delivery team as part of the preparation and support for the intervention? If so, who provided it? Please highlight the text or add details to the 'Info Box' as provided in the report. | 'Training was provided to all teaching staff administering the intervention. Teachers were trained on administering certain reading tasks such as partner reading, paragraph shrinking and prediction relay.' |
| Who is the main focus of t | | that apply) e interest of the Toolkit is on student outcomes, the focus of behavioural on must report outcomes on students' attainment. | change may be on others in educational |
| | □ Students | The main focus of the intervention is on the behaviours, interactions or activities of the students or pupils. Others may be involved (such as in training to deliver or implement a new approach), but the main aim is to change students' activities, behaviours and interactions to improve educational outcomes. | |
| | □ Teachers | The main focus of the intervention is on the teachers and their behaviours, interactions and activities. Although the final outcome may be to improve students' attainment, the focus and study aims include teachers as a clear or explicit part of the rationale. | |
| | □ Teaching assistants | The focus of the intervention includes teaching assistants or teacher's aides (and/or other para-professionals) and their behaviours, interactions and activities. Although the final outcome may be to improve students' attainment, the focus and study aims include teaching assistants as part of the process. | |
| | Other education practitioners | | |
| | □ Non-teaching staff | The main focus of the intervention is on the non-teaching staff in schools and their behaviours, interactions and activities. This includes all staff who would not normally have a teaching role (e.g. | |

| □ Senior management | administrative staff, lunchtime supervisors, facilities management etc.). Although the final outcome may be to improve students' attainment, the focus and study aims include non-teaching staff as part of the rationale. The main focus of the intervention is on the senior management in schools (e.g. head teachers, deputy head teachers, heads of department) and their behaviours, interactions and activities. | |
|--|--|--|
| | Although the final outcome may be to improve students' attainment, the focus and study aims include the senior management as part of the rationale. | |
| □ Parents | Parents or carers of participating students in the educational settings are involved because of their parental or caring responsibilities | |
| □ Other | | |
| ntion teaching approach? ng or learning approach used for a | n intervention session? | |
| □ Large group/class teaching (+6) | A large group (more than 6 students) with a teacher or supporter of the intervention, typically in a classroom setting. | |
| □ Small group/intensive support (3-5) | Intensive small group provision by a teacher, teaching assistant or other supporter of the intervention in a small group setting (3-5 participants in a group), sometimes in a separate teaching space or classroom. | |
| □ Paired learning | Two pupils either working together or peer teaching each other. | |
| □ One to one | One to one instruction where the teacher is not a peer, but a teacher, teaching assistant, volunteer or other educational professional. | |
| Student alone (self- administered) | Pupils or students working through study materials independently and/or unsupervised. | |
| □ Other (explain in notes) | | |

| 5.5. Were any of the following involved in the intervention or approach? | | | | | | | | |
|--|--|---|--|--|--|--|--|--|
| | □ Digital technology- Yes- No | The main approach depends on the use of digital technology (e.g. tablets, laptops, software, internet) by pupils or teachers (e.g. interactive whiteboards). | | | | | | |
| | Parents or community volunteersYesNo | Parents or community volunteers working with their children (or other pupils). | | | | | | |
| 5.6. When did the intervention | vention take place? (Select ALL) n delivered? | that apply) | | | | | | |
| | During regular school hours | The intervention or approach takes place completely or mainly during regular school hours. | | | | | | |
| | □ Before/after school | The intervention or approach takes place completely or mainly before or immediately after normal school hours. This should mainly apply to activities taking place in school or normal educational settings. | | | | | | |
| | Evenings and/or weekends | Where the intervention or approach takes place during evenings or weekends. Activities which take place immediately after school and at school (or in the same educational setting) should not be included. | | | | | | |
| | □ Summer/holiday period | Where the educational activity takes place as additional time in what would normally be a holiday period (e.g. summer holidays or other vacation times). | | | | | | |
| | □ Other (please specify) | | | | | | | |
| | □ Unclear/not specified | Use this code where there are no details provided of when the intervention was delivered and where the information provided does not allow a reasonable inference to be made about timing. The usual inference for most interventions where the timing is not specified will be 'during regular school hours'. If this inference cannot reasonably be made, please highlight/indicate in the 'Info' box the details in the report which produce the ambiguity or lack of clarity. | | | | | | |

5.7. Who was responsible for the teaching at the point of delivery? (Select ALL that apply)
Please provide details (e.g. staff involved, training level provided, number/proportions of staff). This should focus on the experience of pupils, rather than any initial training and support.





| | Research staff | Select this code where the intervention or approach was delivered | |
|---|------------------------|---|--|
| • | | largely or exclusively by researchers or the research team. | |
| | Class teachers | Select this code when the intervention or approach was taught or | |
| | | delivered by professional teachers as part of their usual teaching or | |
| | | wider professional activity. | |
| | Teaching assistants | Select this code where the majority of the teaching or delivery of the | |
| | | intervention is undertaken by teaching assistants (or teacher's aides, | |
| | | para-professionals, auxiliary teachers, nursery nurses in early years | |
| | | settings and other cognate terms). These will be staff usually employed by a school, but without a full teaching qualification. | |
| | Other school staff | Staff employed by the school, but neither teachers nor teaching | |
| | Other school stail | assistants (or those in similar paid roles). It includes administrative | |
| | | staff, lunch-time supervisors, facilities staff. | |
| | External teachers | Teachers or other professional educational staff hired or employed | |
| | zaterna teaerrere | by the research team or delivery organisation. | |
| | Parents/carers | Parents or carers whose main relationship with the intervention is | |
| | | through their parental or caring responsibilities. This includes where | |
| | | parents are working with their own children, or working with other | |
| | | children in the school or educational setting that their own children | |
| | | attend. | |
| | Lay persons/volunteers | Adults (over 18 years) involved as volunteers or undertaking unpaid | |
| | | work who provide the majority of the support to pupils or lead in the delivery of the intervention to students. | |
| | Peers | Other students or pupils at the same school or educational setting as | |
| | Peers | the intervention group; or at another local school (e.g. secondary | |
| | | students tutoring pupils at their own or their peers' primary schools). | |
| | | Peers will normally be of similar age and socio-economic or cultural | |
| | | background. University students tutoring primary school pupils would | |
| | | not be classified as 'peers'. | |
| | Digital technology | Include digital technology where the technology has a role in the | |
| | - | educational activity, such as where automated feedback or marking | |
| | | is provided, or where it provides an explicit teaching role (intelligent | |
| | | tutoring or the use of explanatory videos) or where differentiated | |
| | | activities are offered or allocated automatically to learners. Incidental | |
| | | use of technology which is usually involved in the normal teaching | |

| | | and learning activities of the intervention group should not be included as this has already been recorded. | |
|--|-------------------------------------|--|--|
| | □ Unclear/not specified | Use this code where there are no details provided of who or how the intervention was delivered or where the information provided does not allow a reasonable inference to be made. | |
| 5.8. What was the durati | ion of the intervention? | | |
| | | Duration of the intervention or approach (from beginning to end). This may differ from the duration of the research project or evaluation which could involve pre- and post-testing periods. Please | 'The intervention lasted for 12 weeks'. |
| | | standardise to weeks and fractional part of weeks (e.g. 2 weeks, 0.5 weeks). Academic year = 38 weeks. Add only numeric data in the info box . Highlight additional information. If there is no information provided, please write "Not specified" in the 'Info' box. | This would be entered as 12 in the 'Info' box. |
| 5.9. What was the freque | ency of the intervention? | 1 | |
| | | What is the frequency of the intervention (as delivered)? E.g. daily, twice weekly, weekly, monthly. Please use the week as the standard unit (e.g. once a week = 1, twice a week = 2, every fortnight = 0.5). | 'The intervention was delivered weekly'. |
| | | Add only numeric data in the info box. Highlight additional information. | This would be entered as 1 in the 'Info' Box. |
| 5.10. What is the length | of intervention sessions? | | |
| | | What is the length in minutes of a typical session? This should be the number of minutes. Add only numeric data in the info box . | 'A typical session in the intervention group lasted for half an hour'. |
| | | | This would be entered as 30 in the 'Info' box. |
| | n details and/or fidelity details p | | |
| Are details provided about checkbox and highlighting | | n was implemented or taken up? Please indicate what type of inform | nation by selecting the appropriate |
| | □ Qualitative | Please select if qualitative details about the intervention or approach are provided, such as describing issues or challenges about implementation, or comments on the training and/or implementation process. | |
| | □ Quantitative | Please select if quantitative details about implementation are provided, such as number of schools or teachers trained, or number of sessions attended. | |

| | No implementation details provided | No details about the implementation process are provided. | |
|---|--|--|--|
| | | | |
| 5.12. Are any costs for the Are there any financial costs | | | |
| | Yes (please add details) | If this option is selected, please add details as provided in the report(s). | |
| | No | | |
| 5.13. Who undertook the Here we are interested in h | tcome evaluation? independent the evaluation wa | S | |
| | The developer | This is the usual option and should be selected unless the information is unclear or confusing. This is where the researcher or developer evaluated their own programme or approach. | |
| | A different organization paid by the developer | The development team is different from the evaluation team but it is commissioned directly by the developer or researcher who developed the intervention approaches. | |
| | An organization commissioned independently to evaluate | The research team is different from the evaluation team and commissioned independently (e.g. EEF reports). | |
| | Unclear/not stated | There is insufficient information about the status of the evaluation research to indicate or infer how independent the evaluation is. | |
| | Is this an EEF evaluation? - Yes - No | If the evaluation was funded by the Education Endowment Foundation please select yes. | |

Section 6

What kind of primary outcomes are provided?

In Section 6, you will need to provide information about:

- Tests used to measure intervention outcomes
- Curriculum subjects tested
- Other outcomes
- Description of other tested outcomes (if applicable)

This section requires coders to tick applicable coding checkboxes AND highlight relevant text to apply to codes.





| Question | Applicable Codes | Definition | Example |
|------------------------|---|---|--|
| SECTION 6: What | kind of primary outcomes are | e reported? | |
| 6.1. What kinds of te | | | |
| What types of tests we | | n outcomes on learning at pupil/student level? | The Oaks May O's To Beauties |
| | □ Standardised test (Please specify) | A standardised test is administered and scored in a consistent way. The properties of the test are established through piloting on a group to determine the mean and spread of the scores for a particular target group. Standardised tests are usually named and the properties published. | The Gates-MacGinitie Reading Tests, 1965 were administered to participants. Reliability of the Gates-MacGinitie Tests was based on the testing of 1200 children for Primary C and 700 children for |
| | | Please add the name of the test(s) used, a brief description and any details reported. | Survey E. Both alternate form and split-half reliability coefficients were established. For Primary C, |
| | Researcher developed test (Please add details | A test developed or designed for a specific research report. Please add any details as provided in the report(s). | the reliability coefficient ranged from .8791. For Survey E, the reliability coefficient ranged from .8194. No mention of validity was made in the manual. |
| | School-developed test (Please add details | A test or examination developed and used by a school or schools involved in the research as part of their usual assessment approach. Please add any details as provided in the report(s). | However, as Powell (9) pointed out in his review of the tests, construct validity is suggested through the correlation between scores of |
| | National test or examination (Please specify) | A test or examination used in regional or national evaluations of student and school performance. These may be optional or compulsory, but are organised and/or administered by the regional or national education administration in a particular jurisdiction. | pupils above the third grade on the Gates-MacGinitie and the Lorge-Thorndike Intelligence Tests. By implication, reading achievement |
| | □ International tests (Please specify) | Tests used for international comparisons of student performance (e.g. PISA, TIMMS, PIRLS etc.). Please specify and highlight the name of the test. | as measured on the tests is related to, but different from, Verbal I. Q. as measured by Lorge-Thorndike.' |
| | | | In this instance, the only information that needs to be highlighted is the name of the test, not reliability/validity information. |

| | ets tested (Select ALL that apply) | | |
|---------------------------|--|--|--|
| If the outcomes relate to | T | m, record which subjects are included. Aspects of literacy including speaking and listening, reading and | |
| | □ Literacy (first language) | writing. Include study of literature when this is first language study. | |
| | - Reading Comprehension | This may include aspects such as main idea identification and passage comprehension. When a test provides different outcomes e.g. TOWRE (Test of Word Reading Efficacy) provides word attack, word identification, and passage comprehension as main outcome. | |
| | - Decoding/Phonics | These measures have a focus on recognising letters and making the correct sounds associated with the letters or letter combinations. They may be referred to as phonological or phonemic awareness. | |
| | - Spelling | Where the focus is on the correct spelling of words. | |
| | - Reading other | e.g. phonics, reading fluency, vocabulary comprehension (receptive vocabulary). When a test provides different outcomes e.g. TOWRE (Test of Word Reading Efficiency) provides word attack, word identification and passage comprehension, choose passage comprehension as main outcomes. | |
| | - Speaking and listening/oral language | Speaking and listening or oral language and communication outcomes, including vocabulary use (productive spoken vocabulary). | |
| | - Writing | A test of written language including quality, quantity and written vocabulary (range). | |
| | □ Mathematics | All aspects of mathematics including number and numerical operations, shape and space (geometry), algebra, data-handling etc. | |
| | | | |

| | □ Science | All general science subjects including physics, chemistry, biology as well as specific subjects such as ecology or astronomy. | |
|-----------------------------|--|---|--|
| | □ Social Studies | Either integrated social studies courses or programmes or separate curriculum areas of social studies (e.g. history, geography, civics, sociology, economics or anthropology). | |
| | □ Arts | Expressive and performing arts, including music, art, drama, drawing, painting, sculpture and the decorative arts. | |
| | □ Languages | Where the aim is to develop communicative or literacy capability in a language other than the first language or usual language of instruction in the school. | |
| | □ Other curriculum test | Please provide a description of the outcome as reported where it is a test of a school curriculum subject not included in the categories above (e.g. classics). | |
| 6.3. In addition to the p | rimary educational attainment | outcome, are there other outcomes reported? | |
| | □ Yes | If yes, please provide details in the 'Info' box. | |
| | □ No | | |
| 6.4. If yes, which other of | outcomes are reported? | | |
| | Cognitive outcomes measures (Please specify) | If non-curricular cognitive outcomes are measured, please indicate and specify the outcomes (e.g. reasoning, memory, intelligence etc.). Include the name of the test where possible (e.g. Raven's Matrices, Stanford-Binet Intelligence Scales, etc.). | |
| | Other types of student outcomes (Please specify) | For example: attendance, measures of behaviour, health status, non-cognitive attitudes/dispositions etc. as assessed through a test or survey | |
| | Other participants (i.e. not students) outcomes (Please specify) | If outcomes are measured and reported for other participants involved in the research (such as teachers or parents), please note which participants and which outcomes have been measured e.g. parental participation. | |

Further Information

School Grade & Pupil Age

The following table can be used as a conversion chart when studies report participant year group or grade instead of age in years.

| Age | England | | USA | | Australia | | Germany | | Italy/France | |
|-------|-----------|----------------------|---------------------------------------|----------------------|--------------|---------------------|--------------|-------------------|--------------|----------------------|
| 3-4 | Pre-Scl | hool | | | | | Kindergarten | | | |
| 4-5 | Reception | | Pre K | | Kindergarten | | | | | |
| 5-6 | 1 | 00 | Kindergarten | | Pre-Primary | | | | | |
| 6-7 | 2 | Primary School | 1 | ary I | 1 | ol | 1 | <u>۸</u> | 1 | У |
| 7-8 | 3 | | 2 | enta | 2 | oh | 2 | 1ar 100 | 2 | itar ol |
| 8-9 | 4 | nai | 3 | Elementary School | 3 | Sc | 3 | Primary School | 3 | ementa School |
| 9-10 | 5 | Prii | 4 | Ele | 4 | Primary School | 4 | ш «, | 4 | Elementary School |
| 10-11 | 6 | | 5 | | 5 | rim | 5 | | 5 | Ш |
| 11-12 | 7 | У | 6 | le ol or or | 6 | Ь | 6 | ary I | 1 | |
| 12-13 | 8 | Secondary School | Middle School School (Junior of High) | | 7 | Secondary School | 2 | | | |
| 13-14 | 9 | School | 8 | ∑ S S ⊃ ⊥ | 8 | ary I | 8 | SC 50 | 3 | |
| 14-15 | 10 | Sec | 9 | _ | 9 | nda 100 | 9 | Se | 1 | |
| 15-16 | 11 | (O) | 10 | High | 10 | Secondary | 10 | | 2 | |
| 16-17 | 12 | 6 th form | 11 | High School | 11 | Se | | | 3 | |
| 17-18 | 13 | college | 12 | •, | 12 | | | | 4 | |

www.educationista.com/article/equivalent-uk-school-years

www.wikipedia.org/wiki/Educational_stage

Further Information

Double Coding

The following section outlines codes that have been identified as causing disagreement between coders during the review and reconciliation stages of the double-coding process. To support the coding process, these codes have been listed below in order of most frequent disagreement. For each code the code descriptor as provided in EPPI is given with additional information to support the coding process in italics.

How is the intervention described?

EPPI Descriptor: Brief summary of the intervention as provided in the report(s).

Please include the rationale for impact on learning if given.

Additional Info: Main points that need to be included are main tasks of

participants, short description of the procedure followed during

delivery of the intervention.

What was the level of assignment?

EPPI Descriptor: At which level was the assignment to intervention and control

group conducted?

Additional Info: Was allocation at individual, class or school level? This can

sometimes be unclear or confusing.

Who was responsible for teaching at the point of delivery?

EPPI Descriptor: Please provide details (e.g. staff involved, training level provided,

number/ratio of staff). This should focus on the experience of

pupils, rather than any initial training and support.

Additional Info: Focus on who delivered the intervention under investigation to the

pupils every time.

How realistic was the study?

EPPI Descriptor: Was the intervention implemented under 'real world' conditions?

Factors to consider in assessing the 'ecological validity' include where the intervention took place (usual educational setting for educational approaches of this kind) and who taught or led the intervention with the pupils (e.g. did it involve usual teachers or

other educational professionals?)

Additional Info: Here we are looking for how realistic the intervention or approach

would be for others to adopt. Laboratory studies or those taught only by additional researchers are less feasible in schools without

the support a research project provides.

Are implementation/fidelity details provided?

EPPI Descriptor: Are details provided about how successfully the intervention was

implemented or taken up? Please indicate what type of

information by selecting the appropriate checkbox.

Additional Info: Most studies do not provide rich details on either implementation

or fidelity to the intervention or approach (e.g. for qualitative; potential issues resulting from any training, lack of training time, differences between different people being trained, or lack of clarity in any material or support). We are not collecting extensive data on this but would like to identify studies we can return to that

contain such information in the future.

What was the duration of the intervention?

EPPI Descriptor: Duration of the intervention or approach (from beginning to end).

Please specify units (e.g. months, weeks, days). This may differ from the duration of the research project or evaluation which could

involve pre- and post-testing periods.

Additional Info: Here we are looking to the teaching and learning time of the

programme or approach e.g. 12 weeks, 2 days, etc. If the duration of the intervention cannot be clearly derived from the text and duration is unclear, please tick the checkbox to indicate this. When providing further information about the duration of an intervention in the 'Info' Box, please enter the specific unit first and

then add text.

What type of organisation was responsible for providing the intervention?

EPPI Descriptor: Please indicate what kind of organisation was responsible for the

provision or management and organisation of the intervention.

Additional Info: These are usually the people who trained staff for delivery (if

applicable) or were responsible for developing the intervention.

Is there more than one treatment group?

EPPI Descriptor: Does the research design include more than one arm or contrast

so that more than one estimate of the estimate of effect can be

made from a different comparison group?

Additional Info: Check the number of interventions or versions of the intervention

(if applicable). Even when there are a large number of classes or schools, if they are assigned to two groups (intervention-control)

then select 'No'

Frequency of Intervention?

EPPI Descriptor: What is the frequency of the intervention (as delivered)? E.g.

daily, twice weekly, weekly, monthly.

Additional Info: This is looking at the regularity of the intervention in terms of how

often this happens such as twice per week, or three times per

month.

How were participants assigned?

EPPI Descriptor: How were the participants assigned or allocated to their group

(i.e. treatment and control)?

Additional Info: Please indicate how the participants were allocated to the

intervention or approach. Randomisation aims to avoid allocation bias which may result in systematic differences between groups on both known and unknown factors. Matching aims to create equal or similar groups (on known covariates). In some studies there is no allocation, but the difference is a result of changes that

were happening anyway.

When did the intervention take place?

EPPI Descriptor: When was the intervention delivered?

Additional Info: This is about the timing of the intervention in relation to the school

day. It is reasonable to make some inferences here, such as most lessons taking place during the school day, or a breakfast club being before school. If you are unsure, please tick the 'Unclear'

checkbox.

What kind of tests were used?

EPPI Descriptor: What type(s) of test(s) were used to measure the intervention

outcomes on learning at pupil/student level?

Additional Info: Researchers may use a number of different tests, but we focus

here on the ones that are related only to the outcomes of the intervention under investigation e.g. reading, mathematics at

post-test.

Curriculum subjects tested?

EPPI Descriptor: If the outcomes relate to the subjects of the school curriculum,

record which subjects are included.

Additional Info: Most studies will include outcomes from the school curriculum.

Languages should only be used when these are not the medium of instruction for the school or country where the study is set.

Further Information

Resources for Help & Support

If you encounter a problem that you can't solve using the information in this guide, there are a number of options available to you.

For coding-related queries: Consult the troubleshooting flowchart on Slack (type 'troubleshooting' into the search box).

Please use the specific channels on Slack for particular questions:

#**coding_howto** for copies of coding guides and general information

about the data extraction process

#coding_problems when your question relates to a specific study you

are coding

#coding_reconciliation when your question is either about the reconciliation

process or a query about a specific study

#problematic_PDFs when you have problems with documents that are

difficult to read/highlight

For queries related to using EPPI Reviewer software, please contact: EPPISupport@ucl.ac.uk

There are also a number of training videos for EPPI Reviewer on YouTube.

If you have trouble with EPPI Reviewer freezing or crashing, please record this in the #crashlog channel on Slack.

For Slack-related queries: www.slack.com/intl/en-gb/help

For all other queries, post on Slack or contact: eef.database@durham.ac.uk



