

## Evaluation Summary

Age range	11-16
Number of pupils	12,000
Number of schools	120
Design	Cluster randomised trial
Primary Outcome	GCSE Attainment 8 score

### Intervention

Embedding Formative Assessment (EFA) is whole school professional development programme based on formative assessment. For schools that are randomly allocated to the intervention group, Dylan Wiliam will introduce the concept at a launch event attended by a school-nominated Lead Teachers, and will then support colleagues to run a series of structured workshops (Teacher Learning Communities) throughout a two year period. The Lead Teachers will be supported in this process by SSAT-provided Lead Practitioners. The *Teaching and Learning Communities* aim to embed this work, with the aim of influencing teaching throughout the whole school.

### Significance

This project will test a two-year professional development pack, [Embedding Formative Assessment](#) (EFA), which includes a day's training and materials to deliver 18 monthly internal workshops ("Teacher Learning Communities") in schools. The idea is that teachers can guide themselves through the materials, to run a carefully structured series of workshops. The pack was developed by SSAT with Dylan Wiliam. EFA is an intervention which aims to help teachers to use evidence on pupils' attainment to decide and plan teaching and learning for individual pupils and for whole groups. As well as assisting pupils to make progress on current schemes of work, the experience of effective feedback, through formative assessment, is also believed to equip pupils to achieve in new, but similar areas of work, by enabling them to plan next steps.

There is evidence that feedback is effective in improving pupils' learning. To be effective and to be formative, pupils need to change what they would have done as a result of the feedback, spend their efforts differently and often in very specific areas. However, existing evidence, as summarised in the EEF toolkit, suggests that teachers find it hard to implement consistently and in ways that respond to pupils' individual learning barriers and needs. It is possible that feedback is sometimes effective in helping pupils to overcome specific learning barriers, but has little formative impact. A team, or whole school approach, appears to be a key component of successful feedback interventions and is included in the proposed project through a workshop model.

## Methods

### Research questions

The primary questions the evaluation is designed to answer are:

1. What is the effect on children's attainment in GCSE examinations (measured using Capped 8 attainment score) at age 16 of two years of exposure to the *Embedding Formative Assessment* programme to improve teachers' feedback practices through collaborative learning?
2. What is the effect on children's attainment in GCSE Mathematics at age 16 of two years of exposure to the *Embedding Formative Assessment* programme to improve teachers' feedback practices through collaborative learning?

3. What is the effect on children's attainment in GCSE English at age 16 of two years of exposure to the *Embedding Formative Assessment* programme to improve teachers' feedback practices through collaborative learning?

In addition, we will explore whether there are also impacts on the above outcomes from a single year's exposure to the *Embedding Formative Assessment* programme. Given the shorter programme we would expect a smaller impact, but it is not clear it would still be statistically significantly different from the performance of the control group.

## Design

This will be a cluster-randomised trial. Randomisation will take place at the school level. Schools participating in the trial will be randomly assigned to either the intervention group (which received the *EFA* pack, one day's training from Dylan Wiliam (the programme developer) at the launch event, and ongoing support from a trained Lead Practitioner) or a control group (which receives a one-off payment of £300, the cost of purchasing the *EFA* pack from SSAT).

## Randomisation

Randomisation will be carried out within blocks defined by the proportion of pupils in each school to achieve 5 A\*-C in the 2014 GCSE examinations (low, medium, high – where these thresholds are chosen to achieve equal sized groups), and the proportion of pupils in each school to be eligible for Free School means (low, medium, high – where these thresholds are chosen to achieve equal sized groups). This means that there will be up to 9 blocking variables (or strata) made up of the combinations of these two variables.

Given the correlation between GCSE performance and FSM eligibility, it is likely that the blocks will not all be of equal size. If a block contains fewer than 6 schools it will be combined with the block with the same level of pupils achieving 5 A\*-C at GCSE but a higher proportion of FSM pupils (unless it is the high FSM block, in which case it will be combined with the medium block instead).

Randomisation of schools (to achieve a 50:50 allocation) will be performed as follows:

- Each school will be assigned a randomly generated number;
- Schools will be sorted by blocking variable and, within each block, by the random number
- The first school will be randomised to treatment or control;
- Each subsequent school will be assigned to have the opposite outcome of the previous school.

## Participants

The study will include secondary schools drawn from across England. Within each school, the trial will primarily focus on pupils starting Year 10 when the intervention begins. In addition, we will analyse the outcomes of those starting Year 11 when the intervention begins, as secondary outcomes. Furthermore, where possible, opt-out consent will be sought for pupils in year groups lower down the school (with the exception of the bottom year, usually Year 7, since they will not yet be in the school at time of requesting consent) in order to make it possible for longer-term impacts to be explored (although this is beyond the scope of this protocol).

In order to be considered, schools will have to agree to provide student data in order that it is possible to apply for data from the National Pupil Database, to allow CPD time for all teachers to participate in the *Teaching and Learning Communities*, and to cooperate with the project and evaluation teams during the trial (further details of these requirements are outlined in the Memorandum of Understanding with Schools, included with this document in Appendix E).

SSAT will advertise the trial on its website and also approach schools via its existing schools network. Where possible it will aim to recruit schools that have larger populations of individuals receiving Free School Meals.

## Outcome Measures

The primary outcome will be: pupil attainment measured using GCSE results collected through the National Pupil Database (NPD). Identical data will be collected on children in control schools. All outcomes will be at the individual level.

By using NPD data for pre- and post-test the measurement will be blinded, since pre-test will use attainment at age 11 (i.e. pre-randomisation) and post-test will be marked by GCSE markers who do

not know the identity of the schools whose examination scripts they are marking and overseen by invigilators who are unlikely to know that whether a school is in a treatment or control school.

### **Sample size calculations**

A minimum detectable effect size of 0.19 standard deviations is estimated, based on 120 schools being randomised (60 into treatment and 60 into control), 100 children per cluster, 0.05 significance level, 0.8 power, a 0.20 intra-cluster correlation, a within-school R-squared of background characteristics to outcome measure of 0.44 and a between-schools R-square of background characteristics to outcome measure of 0.32. This calculation does not factor in the proposed blocking, which may increase the power. The effect size was predicted to be around 0.20 standard deviations.

Assuming the FSM sub-group is 14.6% of the total size of the sample (based on data from DfE statistics and ignoring that it may be higher if recruited schools are in more disadvantaged areas), and maintaining all other assumptions (which is likely to be a conservative approach, given lower levels of within-group variation in this sub-group), there is an estimated minimum detectable effect size for this group of 0.21 standard deviations.

### **Analysis plan**

GCSE outcomes will be measured in the following ways:

- Attainment 8 score. This is calculated as the sum of an individual's best 8 GCSE qualifications (of which two must be maths and English, which are also double weighted). At present the points attached to each grade are 8 points for A\*, 7 for A, 6 for B, 5 for C, 4 for D, 3 for E, 2 for F, and 1 for G, but this will change for the cohort we use (in 2017 it is planned to be 8.5 points for A\*, 7 for A, 5.5 for B, 4 for C, 3 for D, 2 for E, 1.5 for F, and 1 for G). We plan to use the prevailing grade points system, while will also cover GCSEs with the reformed grades system (*primary outcome*)
- English grade (using the prevailing grade points system) (*secondary outcome*)
- Maths grade (using the prevailing grade points system) (*secondary outcome*)

### **Analytical model**

The analysis will be carried out using hierarchical linear regression models, reflecting the clustered nature of randomisation. The two types of school included in the trial are:

- a) intervention schools;
- b) control schools.

The estimated impact will be based on the difference between these two groups, regardless of contamination of the control schools or drop out by intervention schools. This is in order to estimate the "intention to treat" (ITT) effect. In addition, the regression models will include Key Stage 2 average point score, grouped ethnicity dummy variables (White, Mixed, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African, Other), gender, eligibility for Free School Meals, School type (Community School, Community Technology College, Foundation School, Independent School, Voluntary Aided School, Voluntary Controlled School), selective/grammar school, whether school has a sixth form.

Estimated impact in terms of GCSE attainment scores will be converted into a Hedges' g effect size (1981). This will use the estimated total pooled standard deviation of the treatment and control groups, rather than the within-school pooled standard deviation as this is a more conservative approach (although estimates will also be produced on this basis to check they do not differ much). Intra-cluster correlations from the hierarchical linear model of the impact will be reported, along with the intra-cluster correlations for the pre-test.

### **Sub-group analysis**

We will consider three subgroups defined by pupil characteristics. These are:

- children who have ever received free school meals (FSM);
- children with low attainment scores in Key Stage 2 attainment tests (bottom quintile);
- children with high attainment scores in Key Stage 2 attainment tests (top quintile).

We will also consider one subgroup defined by school characteristics. These are:

- schools in which there was high fidelity to the planned intervention, defined as the SSAT-employed Lead Practitioner for a school at no point expressing concern to SSAT about the implementation of the project in that school during their monitoring reports.

### **Implementation and process evaluation methods**

The purpose of the process evaluation is to establish fidelity, identify the factors which affect impact of formative assessment within the project and which may explain the findings of the quantitative evaluation. We will also look for evidence of effectiveness and issues which would need to be considered for a wider roll out of the intervention. The process evaluation will include the following:

- NIESR attendance at recruitment and training events
- School visits to carry out teacher interviews (10 schools)
- Focus groups with pupils (10 schools)
- Survey of treatment schools about previous assessment practice
- Survey of control schools about current assessment practice

#### Stage 1: recruitment and training events

We will attend training courses held for schools in the training plus package arm of the intervention in order to understand their experiences of the programme, their expectations and any concerns. We will also review training content and materials to understand how teachers are prepared to deliver the intervention and access to supporting materials and resources. This will include teachers' familiarity with and interest in the pedagogical approaches used within the intervention. We would anticipate that the project team at SSAT will distribute evaluation forms to training participants and we would ask them to provide us with extracted data from these forms.

#### Stage 2: Visits to schools: teacher interviews

Through visits to schools we will interview project leads on their schools' experiences of delivering the programme, their views on the training, materials and factors which have affected the success or otherwise of implementation of Embedding Formative Assessment. In each school we would interview the lead practitioner and other key staff, for example heads of department, among others, so that we understand any differential use and impact of the programme in different subject areas or year groups. In addition to core questions about the programme, preparation and implementation, interviews with teachers will explore practical issues of set up and delivery, adaptations, experiences of the workshops, perceived impact on pupils' learning and attainment, impact on teachers' professional development and implications for long term use and wider roll out.

We will carry out visits to 10 treatment schools towards the end of the first year of implementation, in the summer term of 2016. We will time visits to schools so that we attend one of the monthly workshops.

#### Stage 3: Visits to schools: pupil focus groups

The experiences of pupils will provide valuable insights into their learning behaviour and how this may have been affected by the intervention. Focus groups would be used to explore metacognitive aspects of learning, that is how assessment helps them to understand how they learn, and to progress to higher levels of knowledge and understanding. The emphasis of focus group discussions would be to explain quantitative findings rather than to measure impact qualitatively. These would need to be carried out after visits to schools, since interviews with teachers will take up most of the school day. Through the assistance of SSAT, permission would need to be gained from parents for pupils to take part in focus groups. Focus groups will involve up to 8 pupils, randomly selected by their UPN.

#### Stage 4: Surveys of schools

We will carry out surveys of all treatment and control schools to understand what assessment approaches were used in the absence of the project. Therefore treatment schools will be asked about their approaches prior to implementation and control schools about their practices during the period of the intervention. In order not to raise awareness of formative assessment, it may be advisable to wait until near the end of the implementation in 2017 to survey control schools, and of SSAT's contact in the control schools. Data from treatment schools can be collected earlier and will address the questions of what constitutes business as usual for the schools in relation to providing feedback, particularly whether there is a whole school approach, or specific approaches used in subject areas. We will collect this information through an on-line survey of project leads within schools using email contacts provided by the project team.

#### Stage 5: Follow-up

To examine how the intervention develops, particularly in the second year, we will use data collected by the project team, rather than carry out follow-up interviews ourselves. We understand this data will include written feedback from schools, two written updates and a final case study.

## Costs

It is important for users of the EEF toolkit that good data on the financial and non-financial costs of selecting this intervention are provided. However, it is also important that there is not double counting of resources that would have been used in any case, albeit in a different way in the absence of the intervention, otherwise this would result in an undervaluation of the intervention in a cost-benefit calculation. We do not foresee the need to report any additional pre-requisites for taking part in this evaluation, as it seems likely that all schools should be able to implement assuming there is the staffing will to do so.

We will work closely with the project team to capture information on the costs per school that they have expended as part of the trial, other than those concerned with monitoring which is only in place in order to support the trial. In addition, the process evaluation will include aspects (including in its interviews and pro-forma-based monitoring) that uncover potentially unforeseen costs, as well as checks on whether the estimates and assumptions made as part of the costing process seem credible.

Marginal, financial costs, which will be averaged over the two year intervention period, to be reported will include, but need not be limited to:

- The direct cost of purchasing the pack from SSAT;
- The cost of SSAT provided lead practitioners (where this is not fully captured in pack purchase price);
- The costs of attending the launch event (where this is not fully captured in pack purchase price), including travel/subsistence.

We will convert the estimated cost per school into a cost per pupil using the average number of pupils in the schools in the treatment group.

Non-financial costs to be reported will include, but need not be limited to:

- Additional lead teacher and administrative support time for the organising of the Teaching and Learning Communities (TLCs).
- Teacher time attending TLCs that would displace other CPD.

## Ethics and registration

International Standard Randomised Controlled Trial Number (ISRCTN): **AWAITING**

We take seriously the ethical issues raised in both the quantitative and qualitative elements of the research. NIESR adheres to the Ethics Guidelines of the Social Research Association (SRA). Members of the process evaluation team have Disclosure and Barring Service (DBS) clearance. The ethical implications of the research have been discussed, with reference to the SRA guidelines (in particular their Standard Protocols for Checking Ethical Considerations), by members of the project team and NIESR's Senior Management Team to determine the appropriate course of action and whether further approval is needed. While NIESR has an ethics committee consisting of Trustees, we do not consider that this trial requires such additional clearance; this decision has been ratified by our Director.

As part of this trial we will be collecting personal information and applying for data from the National Pupil Database using this data. However, we will not be linking these data with any other sources; whether participants are in the treatment or control groups will be identified from the school that they attend. Participants' confidentiality and anonymity will be safeguarded by the methods that we have in place. On this basis, we judge that it is appropriate for the trial to use an opt-out consent process, with participants' parents (or legal guardians) making an informed decision based upon the information set out below.

The parental information sheet (attached as Appendix B) provided with the opt-out form provides information on the aims of the research and the use of data in order that they are able to make an informed decision about whether to withhold consent from participation. The form itself makes it clear and simple for parents to ensure their child(ren)'s data is not requested from the DfE and hence they will not be part of the trial. In addition, children who have been opted out will not be asked to take part in qualitative research.

Given the personal information collected in the course of this trial, data security is of utmost importance. As such, it will be transmitted and stored using the security principles underlined in the NIESR Data Security policy (attached in Appendix A) and the procedures set out in further detail for this specific project in the Data Sharing Agreement (attached in Appendix D). This includes secure transfer of data and use of password-protection and encryption as appropriate during data storage.

## Personnel

Project Team (SSAT):

- Anne-Marie Duguid
- Corinne Settle
- Anna Ware

Evaluation team (NIESR):

- Jake Anders (Principal Investigator)
- Richard Dorsett
- Nathan Hudson-Sharp
- Heather Rolfe (Qualitative Lead)

Design of the trial

- sample size calculations - NIESR
- refinement of randomisation approach - NIESR

Delivery of the intervention

- recruitment of schools - SSAT
- delivery of teacher training - SSAT

Measurement of outcomes

- collection of monitoring data - SSAT
- application for NPD data – NIESR

Impact analysis - NIESR

Qualitative analysis - NIESR

## Risks

The data security policy of the National Institute of Economic and Social Research is included with this protocol.

Some of the key risks are listed below:

- School drop-out after randomisation reduces the integrity of the experimental design. Our design mitigates this by requiring consent for data linkage to be collected pre-randomisation. As such, we should still be able to collect NPD data even if schools do not co-operate further with the trial. Nevertheless, SSAT will continue to work closely with schools to reduce the risk of non-cooperation, since this might still reduce the propensity of schools to implement the programme in full.
- Individuals not consenting to NIESR accessing their NPD data may reduce the sample size, internal and external validity of the trial. As consent is collected pre-randomisation it should not affect the internal validity of the trial, since it should be just as likely in the treatment and control groups. In addition, only opt-out consent is required, so we judge that the risk of a large number of opt-outs is low.
- There is the possibility that the delivery of the intervention varies across schools. SSAT will collect monitoring data in order to assess the extent to which schools show high fidelity to the intervention. We will conduct an additional analysis on the high fidelity sample in order to assess if the intervention is successful when fully implemented.
- When randomising clusters rather than individuals the chances of a 'bad draw' increase because of the smaller number of units. We use blocking to limit this problem.

## Timeline

Date	Activity
April-June 2015	Recruitment (SSAT)
June-July 2015	Collection of required school- and pupil-data & randomisation (NIESR)
June-September 2015	Initial engagement with schools (SSAT)
Sept.-Nov. 2015	Assessment of balance between treatment and control (NIESR)
October 2015	Launch event (SSAT)
Ongoing from Oct 2015	Collection of monitoring data (SSAT)
Oct. 2015-Feb. 2017	Process evaluation data collection ongoing during this period (NIESR)
March 2017	Internal reporting of process evaluation (NIESR)
October 2017	NPD data collection from DfE (NIESR)
December 2017	Report on impact analysis (NIESR)

## **Appendix A: NIESR Data Security policy**

See document attached.



## Appendix B: Parental information sheet

[INSERT DATE]

Dear Parent / Carer

Your child's school has applied to take part in an exciting national research project to improve teaching and learning by evaluating the teaching tool Embedding Formative Assessment (EFA). The aim is to improve your son/daughters attainment by gathering together groups of teachers and exploring the principles and activities of formative assessment.

The school has applied to be one of the 120 secondary schools nationwide who will be involved in the project. Anonymous pupil GCSE outcomes in all 120 schools will be analysed at the end of the two year period to evaluate the impact of the tool. A team from National Institute for Economic and Social Research (NIESR) has been appointed to evaluate the project externally.

For the purpose of research, information provided by your child's school (including your child's name, date of birth, gender, free school meal entitlement, and unique pupil number) will be linked with information about your child from the National Pupil Database (held by the Department for Education) and shared with the evaluators, the Department of Education, EEF's data contractor FFT Education and in an anonymised form to the UK Data Archive. Your child's data will be treated with the strictest confidence and stored securely at all times. We will not use your child's name or the name of the school in any report arising from the research. We may ask your child to take part in a survey or focus group; again all data will be treated with strictest confidence.

**If you are happy for information about your child to be used in the evaluation of Embedding Formative Assessment you do not need to do anything. Thank you for your help with this evaluation, your support is much appreciated.**

If you would rather your child's school did not share information about your child for use in this evaluation please complete the enclosed form and return it to your child's school by [INSERT DATE].

If you would like further information about the Embedding Formative Assessment evaluation please contact [INSERT SSAT PROJECT TEAM CONTACT].

Yours faithfully

[INSERT SSAT PROJECT TEAM]

## School Information Sheet

### Whole School Embedding Formative Assessment project with the SSAT and the Education Endowment Foundation

Thank you for your interest in the Embedding Formative Assessment project. Please see information below that will outline the project in more detail, including what you need to do for your schools to be considered.

#### ***The project***

This is an opportunity to be involved in a whole school professional development programme based on formative assessment. Dylan Wiliam will introduce schools to the concept at a launch event, and then schools will run a series of structured workshops (Teacher Learning Communities) throughout a two year period supported by Lead Practitioners.

#### ***Why you should get involved***

Formative assessment involves teachers using evidence of pupils' understanding and learning to make decisions, minute-by-minute and day-by-day, about the next steps in teaching and learning. This evidence could also be used when planning lessons or differentiating activities for individual pupils. When assessing formatively, the feedback from learners and given by teachers moves learners forward. Students are empowered to be owners of their own learning and support each other to progress.

Formative assessment is known to be effective and the difficulty lies in supporting teachers to adopt the practice successfully. This trial will evaluate the impact of a cost-effective and scalable route to implementing formative assessment in a large number of schools. Join us in in being part of a ground breaking new study.

#### ***Evaluation***

The project will be evaluated by a team from the National Institute for Social and Economic Research (NIESR). We are looking to recruit 120 secondary schools from across the country, who will be randomly allocated either to receive the pack and implementation support (60 schools) or to form part of the control group (60 schools). There will be an evaluation exploring how the materials are being used in schools, and GCSE results from implementation and control schools will be used to estimate the impact of the programme on academic attainment at the end of the second year (summer 2017).

If schools are allocated to the implementation group they will need to:

- Identify a lead person for the project and ensure that this lead person (or a colleague) can attend the launch in London on 11 September 2015.
- Allocate a monthly CPD time for all teachers of at least 75 minutes over two years.
- Engage with Lead Practitioner support through regular contact including face to face meetings over the two years.
- Arrange meetings with the evaluators (including potential interviews and focus groups with teachers and students)

If schools are allocated to the control group they may still be asked to provide monitoring data during the course of the trial.

#### ***Next steps***

If you would like to be a part of this exciting study, please fill in the online form to register your interest before 6<sup>th</sup> May.

We will be shortlisting from the expressions of interest and then contacting schools for phone interviews between 11 – 22 May.

#### ***What you will need to do***

If you are shortlisted to be one of the participating schools, you will need to commit to providing student data and allowing CPD time for all teachers to participate in the programme over the next two years. In order to be considered for the programme, schools will also need to:

- Send out the provided information sheet and opt out consent form to all parents and ensure that individuals whose parents do opt out are removed from the list of pupils provided to SSAT.
- Provide the evaluators with the following details:
  - Your school's Unique Centre Number (UCN).
  - Proportion of pupils who achieved 5A\*-C GCSEs for last year.
  - Proportion of pupils eligible for Free School Meals (FSM).
  - Unique Pupil Numbers (UPNs), including name, date of birth, gender, free school meal entitlements and current year group for all students in the school (excluding those that have opted out). These will be used to match with attainment data from the National Pupil Database (NPD).
- Sign the MoU and return to SSAT.

This will need to be completed by the 25 June. Schools will need to complete all consent forms and sign the MoU to be eligible to participate in the project. Schools will then be randomly allocated into either the treatment or control groups.

**Key dates:**

<b>Register your interest before</b>	<b>6 May</b>
<b>Phone interviews</b>	<b>11 – 22 May</b>
<b>School receives documentation to send to parents and the MoU</b>	<b>18 – 29 May</b>
<b>Last date for signed MoUs</b>	<b>25 June</b>
<b>Communication about group allocation</b>	<b>Before 15 July</b>

## Appendix D: Data sharing agreement

### BACKGROUND

In order to evaluate the Embedding Formative Assessment randomised controlled trial it will be necessary for SSAT and participating schools to provide data to NIESR (National Institute of Economic and Social Research) and the Education Endowment Foundation (EEF). Most directly, these data will be used to identify the participating schools and pupils in the Department for Education's (DfE) National Pupil Database (NPD) and access attainment data for the relevant pupils from this. The data will only be used for the purposes of the evaluation and will be treated with great care to achieve high levels of security. Further information on this process is provided below.

### DATA SECURITY

#### **Data transfer**

The project will involve schools transferring potentially sensitive pupil data to NIESR, in order that these may be sent to the DfE to gain access to the relevant extract of the NPD in order to evaluate the project. This data must be transferred securely, meaning that the following process will be followed carefully.

Schools will be provided with a password with which to encrypt the Microsoft Excel (.XLSX) files they use to transfer these data. This will be provided to each school by SSAT over the phone as part of their recruitment process. These passwords will conform to the following standards:

- Minimum length: 8 characters
- Contains at least one uppercase letter
- Contains at least one lowercase letter
- Contains at least one number

Schools will provide their data to NIESR by emailing the encrypted Excel (.XLSX) file to NIESR using the email address [eefschools@niesr.ac.uk](mailto:eefschools@niesr.ac.uk). This email inbox is only accessible to members of the evaluation team. SSAT will provide an encrypted Microsoft Excel (.XLSX) file containing these passwords to NIESR using the same address, with the password for this encrypted file conforming to the same standards and provided to NIESR via a telephone call.

As part of the process of application to the DfE for access to the NPD, these data will need to be transmitted to the DfE. This is likely to be done using the DfE's secure Key2Success service. Whatever form it takes, all relevant guidance from the DfE will be followed for this process. Matched data will be transmitted back from the DfE to NIESR using the same process.

After final completion of the project the data will be passed to EEF and/or its contractors for the purposes of long-term follow up. This data transfer will be carried out in line with the security procedures outlined above.

#### **Data storage**

These data will be stored by NIESR using their secure network storage. The data will be treated as "Confidential" using NIESR's internal rating system, meaning that data are stored in an area that is only accessible to users that are specifically allowed access to the data (this will be restricted to members of the evaluation team); in addition the data is encrypted when stored. In addition, the NIESR network is fully protected at the perimeter by a firewall device. This prevents external traffic or connections into the NIESR network unless specifically allowed.

The data will be backed up to an internal storage platform, encrypted in transit, and encrypted while it is stored. We do not foresee the need to move the data onto physical media at any time. Access to the data will be monitored to identify individuals accessing and quarterly access reports checked to ensure no unauthorised access has taken place. After completion of the project and publication of any related academic outputs, NIESR's copy of the data will be destroyed using PGP Shredder software, set to use 3 passes, which exceeds DoD 5220.22-M data destruction standards.

### USAGE OF THE DATA

At no time will individual- or school-level data be disclosed to any third parties (notwithstanding end of project transfer to EEF/its contractors as noted above). It will only be used for purposes connected with evaluation of this project including, but not specifically limited to:

- Checking randomisation has worked through analysing the average characteristics of individuals and schools in the treatment and control groups;
- Calculating the estimated impact of the project by comparing the outcomes of individuals in treatment and control schools.

This includes use of the data for academic publications by the evaluation team, which will follow the same standards in terms of ensuring confidentiality and anonymity of participants.

### MONITORING DATA/PROCESS EVALUATION

During the project SSAT will be keeping in regular contact with participating schools (treatment and control groups). They will also collect ongoing monitoring and internal evaluation data from participating schools. Where relevant, this will be shared with NIESR for the purposes of quantitative (e.g. identification of high fidelity treatment group) and process (e.g. training evaluation, progress updates, contacting schools to participate NIESR research visits) evaluations.

### AGREEMENT

NIESR and SSAT agree work collaboratively in the sharing of data for the success of this project and will follow the procedures outlined in this document when handling the potentially sensitive data included that will be shared as part of this project. Any actual or potential breaches will be notified to the relevant data controller.

Signed:

Maureen Cole-Burns  
Chief Operating Officer  
National Institute of Economic and Social Research

XXX  
XXX  
SSAT

## Appendix C: Memorandum of Understanding with schools

### School Agreement to participate in the Whole School Embedding Formative Assessment project with the SSAT and the Education Endowment Foundation

Please complete and sign both copies, retaining one and returning the second copy to Anna Ware, SSAT, 5<sup>th</sup> floor, 142 Central Street, London EC1V 8AR or by email to [efa@ssatuk.co.uk](mailto:efa@ssatuk.co.uk) by 25 June 2015.

School Name: \_\_\_\_\_

School Postcode: \_\_\_\_\_ Headteacher Name: \_\_\_\_\_

#### **Aims of the Project**

The aim for the project is to test the effectiveness of a whole school approach to Embedding Formative Assessment, designed by Professor Dylan Wiliam with SSAT. A tool will be provided with the materials that schools need to develop and deliver Teacher Learning Communities (TLCs). Groups of teachers have scheduled meetings and explore the principles and activities for formative assessment with the objective of improving teaching and learning.

#### **Rationale**

Formative assessment is known to be effective, however the difficulty lies in schools being able to adopt the practice successfully and in the long term. The Education Endowment Foundation is funding a research project to assess the impact of a whole school approach to Embedding Formative Assessment on pupil attainment. The project will run for two years to ensure that the approach is embedded within the school and will evaluate the impact of a cost-effective and scalable route to implementing formative assessment in a large number of schools.

#### **The Project**

After the phone interview, shortlisted schools were asked to inform all parents about the project and collect any Opt Out Forms returned by parents (see separate correspondence sent on Thursday 28 May 2015). Schools were also asked to provide the following school and pupil level information.

- School's Unique Reference Number (URN)
- The school's LAESTAB code.
- Unique Pupil Numbers (UPNs) for all children.
- Child's name, date of birth, gender and free school meals entitlement.
- Pupil's current year group.
- Proportion of pupils eligible for Free School Meals (FSM).
- Proportion of pupil's who achieved 5A\*-C GCSEs last year.

The evaluation team will use this information and access the National Pupil Database to collect GCSEs scores for all relevant pupils in order to assess any impact of the project on attainment.

Across the 2 years of the trial the evaluators may survey and/or interview pupils and teachers involved to assess the impact of the tool on teaching and learning. These will be non-invasive and arranged at a time convenient to the school.

#### **The Evaluation**

The evaluation is being conducted by National Institute for Economic and Social Research (NIESR) and a Randomised Control Trial (RCT) approach is being applied.

Schools who agree to take part will be randomly allocated to either:

- 1) **An intervention group** and will receive an EFA pack, attend a launch event with Professor Dylan Wiliam, and will receive a mix of school based and Skype/telephone implementation support by a Lead Practitioner over a two year period.
- 2) **A control group** and receive no intervention but will be given a small financial incentive.

Random allocation is essential to the evaluation as it is the best way of understanding what effect Embedding Formative Assessment has on children's attainment. It is important that schools understand and consent to this process.

### **Use of Data**

Pupil data will only be used for the purposes of analysis and will be treated with great care to achieve high levels of security. Pupils' questionnaire responses will be treated with the strictest confidence and stored securely, accessible only to restricted users.

At no time will individual or school-level data be disclosed to any third parties. It will only be used for purposes connected with the process including:

- Checking randomisation has worked through analysing the average characteristics of individuals and schools in the treatment and control groups;
- Calculating the estimated impact of the project by comparing the outcomes of individuals in treatment and control schools.

### **Responsibilities**

SSAT will:

- Shortlist successful schools through application and interview process.
- Provide the evaluators with a list of schools to be allocated to the control and trial groups.
- Let schools know which group they have been allocated to, based on the information provided by the evaluators.
- Be the first point of contact for any queries.

Also:

For the control schools;

- Promptly pay the £300 financial incentive after allocation.
- Will share the evaluation findings and final case studies with the school.

For the intervention schools;

- Deliver the pack to the schools.
- Allocate a Lead Practitioner.
- Hold a launch event with Dylan Wiliam on Friday 11<sup>th</sup> September 2015 for school EFA leads
- Provide on-going implementation support to the school.
- Liaise with the Lead Practitioners and ensure quality of support.
- Collate case studies for and produce publications at the end of each year.
- Programme and project management for the duration of the project
- Deliver an event in the final year with Dylan Wiliam.

The EVALUATION TEAM (NIESR) will:

- Conduct the random allocation.
- Collate School and Pupil Level data provided by schools.
- Obtain National Pupil Database data for participants from the DfE.
- Store all data safely and securely.
- Analyse data from the project in order to produce impact estimates.
  
- Conduct the process evaluation, including analysis and reporting from this.
- Produce end of project evaluation report.
- Disseminate research findings.

In order to participate in the project, both intervention and control SCHOOLS will have:

- Sent all year 7-10 parents the consent and opt out form.
- Provided the evaluators with schools and pupil level data as outlined above.
- Consented to random allocation and committed to the outcome of the result.

If in the **intervention group** schools will:

- Commit to providing CPD time for teachers to hold 18 monthly TLCs over the two year period for a minimum of 75 minutes per meeting.
- Appoint at least one lead teacher who will be the main contact for the project.
- Have a project lead attend the launch on 11<sup>th</sup> September with Professor Dylan Wiliam.
- Commit to regular and timely communication with SSAT.
- Engage with Lead Practitioner implementation support through regular contact including face to face meetings over the two years.

- Meet with the evaluators (including potential interviews and focus groups with teachers and pupils)
- Write a case study at the end of each year about their experiences on the project for a publication to be circulated nationally.
- Share permissible data with the evaluators, and liaise with them as required, including participation in evaluation activities.
- Inform SSAT if there is a change of lead teacher for the project or Headteacher at the school.
- Allow extra staff time if necessary and within reason to the project.

If allocated to the **control** group:

- Schools may still be asked to provide monitoring data during the course of the trial.

**As a school I commit to remaining a part of the Embedding Formative Assessment project as detailed above for the period of September 2015 – July 2017**

Head teacher name: \_\_\_\_\_

School name: \_\_\_\_\_

Head teacher Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Head teacher Email address: \_\_\_\_\_

School Contact (if different from head teacher): \_\_\_\_\_

School Contact email address: \_\_\_\_\_

School Tel no: \_\_\_\_\_

Number of Teachers (including SLT) at school as at [Insert date] \_\_\_\_\_

Number of pupils at school as at [Insert date] \_\_\_\_\_

Thank you for agreeing to take part in this research. Please return this form to:  
 Anna Ware, SSAT, 5<sup>th</sup> floor, 142 Central Street, London EC1V 8AR or [efa@ssatuk.co.uk](mailto:efa@ssatuk.co.uk)