Social and economic benefits of learning in natural environments

A study of learning outside the classroom in natural environments (LINE) in primary school settings to provide a forecast of social value

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Further information

This report can be downloaded from the Natural England Access to Evidence Catalogue: http://publications.naturalengland.org.uk/. For information on Natural England publications contact the Natural England Enquiry Service on 0300 060 3900 or e-mail enquiries@naturalengland.org.uk.

Executive summary

This report provides a forecast of the potential social impact of 'learning outside the classroom in natural environments' (LINE) in primary school settings in England. The participating schools were drawn from schools that hold the Council for Learning Outside the Classroom (CLOtC) Mark or that do not have the CLOtC Mark but have LINE embedded in their regular practice, or those. For the purposes of this exploratory study and forecast it is felt that these schools would be better able to articulate and evidence the work they have done in this area.

For this study, it was agreed to focus on the existing body of evidence regarding learning outside the classroom in the natural environment. In addition, ten schools formed part of a stakeholder engagement process that provided direct feedback through consultation, with six schools taking part in further semi-structured interviews.

It is evident throughout the full scope of the study undertaken that LINE is making a difference to the lives of children across a wide range of primary school settings. The forecast Social Return on Investment (SROI) ratio for learning outside the classroom in natural environment is **£4.32 for every £1 invested.**

Contents

1. Introduction

Natural England commissioned Social Value Business to undertake an exploratory study to report on the social and economic benefits of investing in learning outside the classroom in natural environments for younger children of primary school age (4-11 years). Natural England wanted to review the social and economic benefits of the range of practice currently happening in schools. The objectives and outcomes of the study were:

The objectives of the study were:

- to understand how outdoor learning supports and benefits young children by capturing, and reporting on the direct, indirect, and broader value of learning outside the classroom in the natural environment
- assess the social & economic impact of the programme including the outcomes achieved for children
- identify unexpected outcomes and emerging outcomes

The intended outcomes for the study were:

- measure the Social Return on Investment (SROI) to support the evidence of the outcomes achieved.
- through case studies assess the range and complexity of the concurrent multiple benefits of learning outside the classroom in the natural environment, including evidencing assumptions that may contribute towards understanding the role of LINE in increasing attainment and establishing the enduring nature of positive impacts in children's' future lives.

These objectives have been achieved through engaging and consulting with a range of stakeholders, building on desk-based research. The principles of SROI have been used to value the outcomes identified throughout the study.

2. Learning outside the classroom in the natural environment – rationale for the study

The term learning outside the classroom in the natural environment (LINE) encompasses a range of provision, including:

- activities within a school's own buildings, grounds or immediate area;
- educational visits organised within the school day; and
- residential visits that take place during the school week, weekends, or holidays.

The term natural environments in this context includes all accessible outdoor green spaces where children can play, the spaces that enable childhood discovery and learning, adventure, and escape, or simply to experience the seasons changing. It is not limited to those sites run by third parties or to spaces set aside for nature conservation, for getting close to nature or designed for learning about the environment. It includes, importantly, school grounds that can be used for intra-school or inter-school facilities. The most important natural environments are those close to where children live as they will continue to connect with them and feel a sense of responsibility towards these environments as part of their local community as they progress to adult life.

Over the past ten years there have been five significant reviews which have examined children learning in natural environments in the UK and further abroad (Rickinson et al. 2004; Malone 2008; Gill 2011; Dillon and Dickie 2012; Fiennes et al. 2015). All these reviews evidenced what outdoor learning can achieve, leading to an improved quality of life for children. A common theme across all the reviews is that increasingly, children have limited opportunities to enjoy their childhood outdoors, or in informal learning settings. The evidence summarised by Malone reveals that such limitations deny children:

> '… the opportunity to develop understandings and experiences that will have a long-term impact on the quality of their lives, particularly in relation to their physical health and wellbeing and 'character capabilities' such as application, self-regulation, empathy, creativity, and innovation, and their capacity to be successful learners and active contributing members for a sustainable society.'

In 2012, Dillon and Dickie reported that challenges:

> '… facing the natural environment sector include a failure to provide coherent, coordinated services for schools at a local level, and the relatively small proportion

of schools that appear to be reached through existing services.' (Learning in the Natural Environment: Review of social and economic benefits and barriers).

Schools feared accidents, cost, and curriculum pressures – staff were not always confident to teach in natural environments, and in some instances accessing natural environments was difficult. Benefits to learning outside the classroom included having first-hand experiences, which enhanced learner understanding, and helped to make subjects more interesting. However, at this time, the evidence of the benefits of learning outside the classroom was disjointed and so Natural England commissioned a second summary paper in the Report which synthesised the evidence. The evidence suggested:

'… the value of LINE in England is significant and involves benefits arising from educational attainment, attitudes to other children, awareness of environment and natural science skills, behavioural outcomes and social cohesion, health benefits, school staff morale, and a more attractive school (aesthetically and to prospective parents).'

The Report concluded that further research should focus on examining any changes in teacher motivation and analysing pupil absence data to identify impacts of LINE.

In 2011, the Natural Environment White Paper, *The Natural Choice: securing the value of nature* (Department for Environment and Rural Affairs, 2011) described the importance of connecting people and nature. Specifically, it said that every child in England should be provided with opportunities to experience and discover the natural environment, not only because it offers a wide range of benefits, but also because children were losing their connection with the natural environment. Consequently, Government set out key reforms which intended to encourage teachers and schools to teach outdoors. Natural England worked with a range of partners to deliver the Natural Connections Demonstration Project, which was run by Plymouth University (2012-2016). The project was the first stage in trying to realise the ambition in the white paper. The Natural Connections Demonstration Project [7] aimed to:

'develop understanding of what was needed to engage schools with LINE and enable a culture change within schools, with teachers embracing both the concept and the practice of taking curricular learning outside.'

A number of studies since 2011 have advanced understanding of how particular LINE activities can support academic achievement and social emotional intelligence for students (Seyedehzahra Mirrahimi et al. 2011), understanding of children's preferences and motivations in learning outside (Norodahl and Einarsdottir 2015) and the effects of activities on multiple outcomes (Education Endowment Foundation 2022). Studies (Andrea FaberTaylor and Carrie Butts-Wilmsmeyer 2020) have also found that time spent in 'green schoolyards' was linked to greater self-regulation of

pupils in Kindergarten, and that regularly learning outside would allow pupils to learn from nature and, *'form deep connections to nature, develop within themselves a sense of choice, and find enjoyment in the natural environment'* (Boyd and Scott 2022). 2020 evidence (Prince 2021), from four retrospective empirical research studies on the lasting impacts (> 12 months) of outdoor residential experiences for young people in the UK since 2015 found that lasting impacts included: self-confidence, independence, and communication.

In the 25 Year Environment Plan, 'A Green Future' (Her Majesty's Government 2018), the Government set out a strong commitment to:

> 'promoting health and wellbeing through the natural environment' and to 'encourage children to be close to nature, in and out of school, with particular focus on disadvantaged areas'.

Natural England, Defra and Department for Education worked together to develop to help deliver this commitment through the Children and Nature Programme.

The Nature Friendly Schools project (2019-2022) was one of the Children and Nature Programme delivery projects and has supported the outdoor learning journey of more than 48,000 pupils and 720 teachers across more than 180 primary, secondary, special, and alternative provision schools, embedding a sustainable and scalable model in all school types:

> 'By developing teachers' confidence and ability to drive forward outdoor learning in schools, Nature Friendly Schools is giving thousands of children from some of the most disadvantaged areas in England the opportunity to get closer to nature benefitting their learning, health and wellbeing, and care and concern for the environment. It is fuelling creativity and a sense of adventure, allowing children to experience the joy that nature can bring. Pupils are benefitting from at least two hours spent outdoors every week, experiencing wildlife on their doorstep and further afield in new landscapes. School grounds are being made greener and wilder as outdoor classrooms are created alongside wildflower meadows and allotment areas' (The Wildlife Trusts 2022).

Schools that are part of the Nature Friendly Schools project have been able to:

> 'highlight the significant impacts arising from the school's participation in the Nature Friendly Schools project and the positive benefits it had on pupils' mental health, wellbeing, attitude to learning, social skills and care and concern for the environment.'

Some project schools have also been able to track the social, emotional, and mental health development of pupils, including how vulnerable pupils have particularly benefitted for small group work and learning outside of the classroom. The evidence

of the benefits has shown increased engagement across all lessons, and subsequent attainment.

Overall, the literature shows that from initial pioneering attempts to take learning outside the classroom, currently both governmental and non-governmental organisations actively encourage the use of LINE and are seeking robust evidence on which to underpin future studies. Interestingly, almost regardless of the information being sought through a range of studies into LINE, findings are generally very positive, emphasising diverse types and forms of learning, together with unexpected gains.

This and other work raise an important, if fundamental, issue – LINE can be undertaken in many ways, with widely differing learning goals, and in diverse locations. Consequently, whilst there is plenty of evidence discussing the implementation and benefits of LINE, to date there is little homogeneity in either practice or impact findings.

It is now important to capture, and report on, the direct, indirect, and broader value of learning outside the classroom in the natural environment so that we can understand the ways in which these outcomes benefit pupils, staff, and the wider community.

3. About Social Impact Evaluation

Over recent years there has been an increase in demand for organisations to provide more information about their social and environmental impact. A social impact evaluation assesses the changes that can be attributed to an intervention, such as a programme or project, and will clearly show the intended changes, as well as ideally the unintended ones.

Impact measurement and the results produced are a powerful tool for communicating what organisations do and how effective they are at their work. This is particularly useful from a commissioning perspective as additional information can be taken into consideration when assessing value for money.

An element of impact measurement and reporting is Social Return on Investment (SROI). This is a way of accounting for value creation which requires a mix of information including qualitative, quantitative, and financial. In the same way as quoting a financial return on investment without any other information, the SROI ratio, by itself, has little meaning. The ratios provide the starting point for understanding the reasons for the difference, which also needs to draw on other types of information. A key element of SROI is to consult with all relevant stakeholders, therefore providing transparency to the findings of the study.

Whilst the SROI framework can be a useful tool to inform policy and decision making as it accounts for the wider social benefits there are recognised limitations. The challenges that need to be considered in this study include:

- **difficulties in quantifying the value of benefits via indicators and financial proxies.** The choice of indicators can be influenced by access to good quality data, and financial proxies' databases. The nature of this study has included the creation of bespoke proxies which rely on the subjective experience of experts to identify appropriate indictors for difficult to measure aspects.
- **the ratio and legitimacy of the report.** It can be argued that too much emphasis is placed on calculating the ratio – the ratio is only an indication of the overall study. The SROI ratio has to be supported by strong stories, and narratives of the changes stakeholders have experienced through taking part in the activities.
- **limitation on replications and scaling up**. SROI projects are hard to replicate, this study uses SROI as a forecasting technique to understand the potential impact LINE can have for pupils, teachers, school staff and the wider community. In this context the benefit of SROI is realised through the identification of the conditions that underpin a change for stakeholders and the processes involved. This in turn provides the knowledge required to scale up future projects.

At this stage SROI is an appropriate methodology for forecasting impact. Having a transparent reporting may help promote trust and confidence among stakeholders and allow organisations to talk to all stakeholders and bid for contracts with tangible evidence of outcomes. Also in a broader context, being able to articulate impact enables organisations to inform the public about their work, raising awareness not only of the issues that concern them, but also of the outcomes they have achieved for the wider community.

It is also useful for those benefiting directly from the service to see the organisation reporting in a clear and transparent way about their work. Where appropriate, impact measurement can help beneficiaries understand the services, processes and outcomes organisations offer, and to see the real benefits that accompany them.

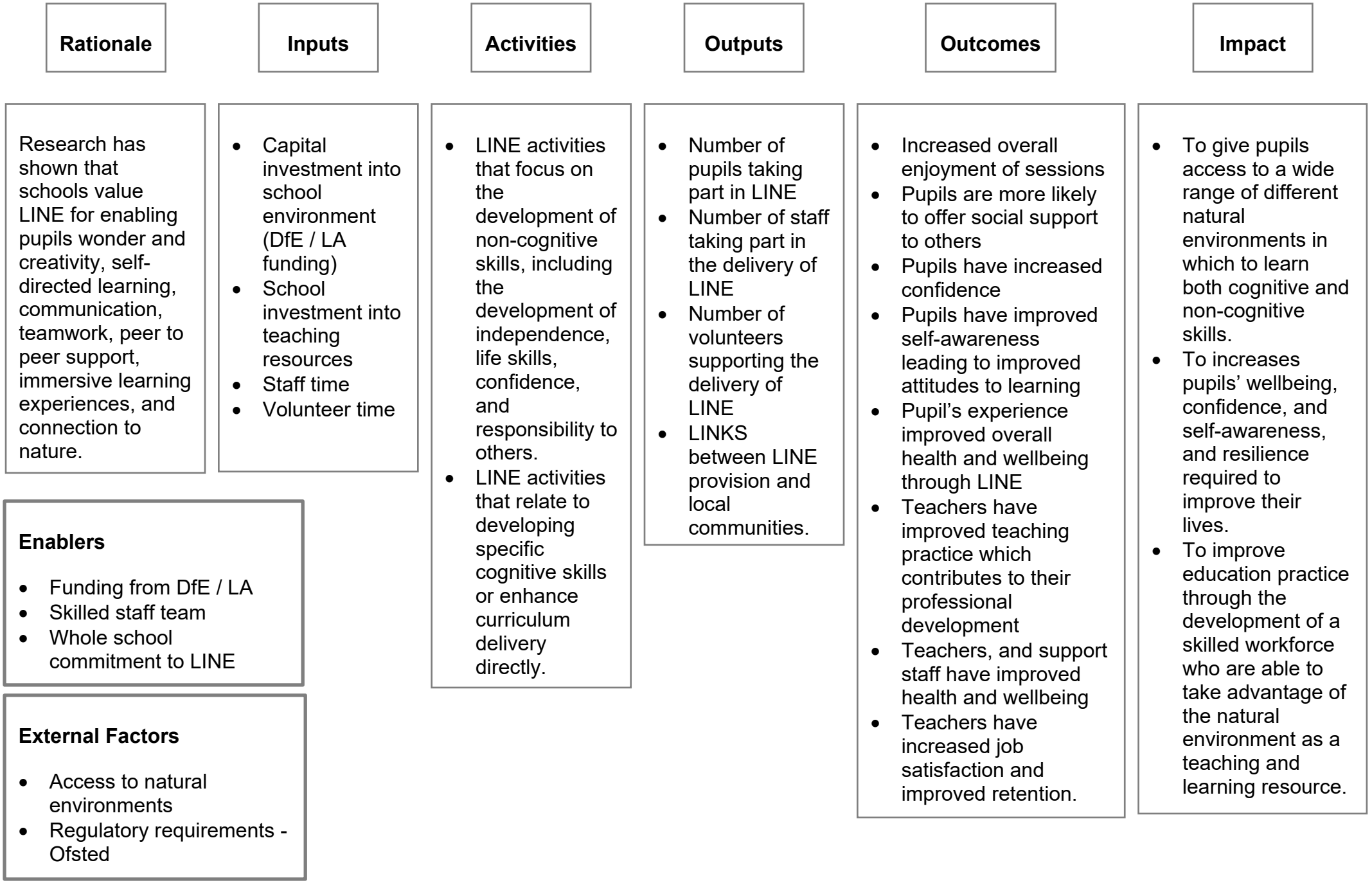
4. Theory of change

A theory of change is a tool that describes why the particular way of working is effective from the rationale for the work, the activities undertaking through to the outcomes, and impact. It describes the change made and the steps involved in making that change happen. Theories of change also offer an opportunity to depict the assumptions that lie behind the reasoning, and where possible, these assumptions are backed up by evidence.

- **Rationale -** it establishes the rationale for the intervention and the chain of outcomes that were expected to be triggered for beneficiaries and other stakeholders.
- **Inputs -** this acknowledges the inputs required to deliver the service, financial and otherwise.
- **Activities -** the activities that the service delivers to achieve the outputs, outcomes and impact of the service.
- **Outputs -** these are data about activities and are the direct results of activities.
- **Outcomes -** these are the medium and long term observed effects of the activities and are often the 'real' changes that organisations are trying to make on the way to achieving greater impact.
- **Impact -** the longer-term effect of an activity on the social fabric of the community and well-being of the individuals and families.
- **External influences -** the theory of change considers external influences that could affect the service, such as funding ceasing or other organisations beginning to offer similar services and enablers that will help the service to run, such as continued funding and credibility/reputation.

The following figure demonstrates the initial theory of change for learning outside the classroom in the natural environment which was used to support the evaluation plan.

Figure 1: Theory of change for Learning outside the classroom in natural environments



5. Scope and Stakeholders

5.1 Study Methodology

This study sought to understand the wider social and economic benefits that are realised through the teaching and learning of LINE for primary aged children as part of the national curriculum. Initially, benefits and impacts are identified through the evaluation of previous research. These are then supported and evidenced through additional stakeholder interviews. The benefits that are identified, and then confirmed through stakeholder interviews are then monetised using standard principles of SROI. The participating schools were drawn from CLOtc Mark schools or others who have LINE embedded in their regular practice, or those who hold the Council for Learning Outside the Classroom (CLOtC) Mark due to these schools being more able to articulate and evidence the work they have done in this area.

The objectives of the study were:

- to understand how outdoor learning supports and benefits young children by capturing, and reporting on the direct, indirect, and broader value of learning outside the classroom in the natural environment
- assess the social & economic impact of the programme including the outcomes achieved for children.
- identify unexpected outcomes and emerging outcomes

The intended outcomes for the study were:

- measure the Social Return on Investment (SROI) to support the evidence of the outcomes achieved.
- through case studies assess the range and complexity of the concurrent multiple benefits of learning outside the classroom in the natural environment, including evidencing assumptions that may contribute towards understanding the role of LINE in increasing attainment and establishing the enduring nature of positive impacts in children's' future lives.

The following table shows what activities would be carried out and what evidence would be used to achieve the objectives of the study:

Table 1: Table showing methods used to investigate objectives and evidence used to understand outcomes in the study.

Objective	**Method**
Understand how outdoor learning supports and benefits young children by capturing, and reporting on the direct, indirect, and broader value of learning outside the classroom in the natural environment	Analysis of existing research and reports featuring learning outside the classroom in the natural environment. Consultations with staff working in primary settings Consultation with pupils External Stakeholder consultations
Assess the social impact of the programme including the outcomes achieved for children.	Analysis of existing research and reports featuring learning outside the classroom in the natural environment. Consultations with staff working in primary settings Consultation with pupils
Identify unexpected outcomes and emerging outcomes	Consultations with staff working in primary settings Consultation with pupils
Outcomes	**Evidence**
Measure the Social Return on Investment (SROI) to support the evidence of the outcomes achieved.	Analysis of existing research and reports featuring learning outside the classroom in the natural environment. Consultations with staff working in primary settings Consultation with pupils Valuing outcomes using sector recognised proxies Applying SROI methodology

Through case studies assess the range and complexity of the concurrent multiple benefits of learning outside the classroom in the natural environment, including evidencing assumptions that may contribute towards understanding the role of LINE in increasing attainment and establishing the enduring nature of positive impacts in children's' future lives.	Consultations with staff working in primary settings Consultation with pupils Applying SROI methodology

5.2 Stakeholders

This study explores the changes to key stakeholders as a result of a particular activity, in this case learning outside the classroom in the natural environment. Stakeholders are the people or organisations that experience change, both positive and negative because of the activity that is being evaluated. This study indues stakeholders who are directly impacted by the activity as shown in the table below:

Table 2: Table showing stakeholders and reasons for inclusion in the study

Stakeholder	**Reason for Inclusion**
Pupils	Pupils are one of the main beneficiaries of LINE and have the most direct experience of how the opportunities offered impact on them.
Staff team from schools	Directly responsible for delivering LINE and engaging with internal and external partners to maximise opportunities. Staff are responsible for making judgements regarding pupil progress based on their observations. Staff are also expected to experience an impact where supporting pupils to access LINE provides opportunities to enhance their own health and wellbeing and professional practice is outside of their normal job role, for which they receive a salary.

School management teams	School management teams can provide an overview for the whole school approach to LINE, and how the changes that can be attributed to LINE are viewed by external regulators. This includes headteachers, deputy headteachers, and stage leaders, for example EYFS lead teachers.

5.3 Consultation Methods

The study used semi-structured interviews as a consultation method with staff in schools, a short questionnaire was also completed by a small number of schools directly with pupils. The following table shows how each stakeholder group was consulted with.

Table 3: Table showing consultation methods used with stakeholder groups in the study

Stakeholder	**Consultation method**
Pupils	Short questionnaire completed with school staff. Commentary on the perceived experiences of pupils gathered during semi-structured interviews with staff.
Staff team from schools	Online (Microsoft Teams, or Zoom) semi-structured interviews
School management teams	Online (Microsoft Teams, or Zoom) semi-structured interviews

6. Inputs, Activities, and Outputs

6.1 Inputs

The study is based on understanding the social and economic value of learning outside the classroom in natural environments and has to consider the input of various stakeholders into the activity. A large proportion of the activity is funding through school staff and resource input which is, in turn, funded by the per pupil allocation each school receives from their local authority. The following inputs have been considered to establish a cost for the delivery of learning outside the classroom in the natural environment.

Table 4: Table showing type of type of resource input and value by stakeholder group

Stakeholder	Description of Input	Input Value (£)
Pupils	Time spent at school	£0
School staff	Staff time spent to develop and deliver LINE	£0
Local Authorities	The cost to the school of delivering LINE including salaries, transport costs, supplies, and services.	19 days of outdoor learning for children (based on 0.5 days per week, over a 38-week year) 19 days = 10% of annual school funding of £4,548 per pupil = £454.80 per pupil. average size primary school is 270 pupils (454.80x 270) = **£122,796.00 per year, per school**. Teacher / staff training and outdoor learning resources. Average of £500 per staff member based on input into 10 staff members = **£5,000 per year, per school**
Parents/ grant funders / DfE	Grant funding for specific items relating to LINE (average per school). Access to external community environments Access to volunteers	Average of 1 volunteer per school (19 days of volunteering at 6 hours per day = 114 hours. National TOMs Themes (Social Value Portal website 2022), Outcomes and Measures) value for volunteering at £16.04p per hour = **£1828.56 per year, per school**

Total input is £129,624.56 per school, per year.

(Figures based on assumptions as to the size of an average primary school).

6.2 Activities

The data gathered from the schools participating in the study shows that each school offers a different range of activities linked to learning outside the classroom in the natural environment. The common theme that runs through the activities is the focus on developing independence, life skills, communication, teamwork, and social skills. The activities are presented in a way which offers children more freedom and creativity to choose the way in which they engage with both the activity and their peers. Where the activities are well planned, with an emphasis on personalisation for individual pupils, they appear to display all the positive attributes of inclusion relating to concepts such as equality, recognition, and freedom. Children establish relationships based on the feelings of belonging to social and friendship groups, and they are seated within a position of mutual trust. This means that their contributions will be both valuable and valued enabling children to develop their sense of responsibility towards others and the natural environment.

6.3 Outputs

During the scope of the study six schools took part in semi-structured interviews. Four of those schools completed follow up questionnaires with pupils from across the full age range of the school.

7. Outcomes

During the scope of the study six primary schools took part in semi structured interviews. These outcomes reflect the findings from primary schools and cover the difference LINE makes to pupils and teaching staff.

7.1 School consultations

The schools who took part in the semi-structured interviews range in size from 40 pupils to approximately 250 pupils. They are based in both urban and rural locations and include one special school. The schools deliver a wide range of LINE in a variety of different contexts. Due to the nature of the activities and the different resources available to schools they take place in a variety of locations, or across more than one location:

Provision on the school site:

- Nature areas in school where children are caretakers. For example, beekeeping, vegetable growing
- Designated outside spaces for gardening, cooking, and therapy
- Outside areas for meetings
- Nature Studies
- On site Forest School areas and activities
- Allotments on site growing both vegetables and flowers
- Timetabled outdoor maths
- Outdoor continuous provision for Reception and Key Stage 1
- Sensory gardening
- Vegetable/plant growing for specific class projects and topics

Community based provision:

- Trips out to local nature reserves, country parks
- Nature Studies of both local and specific environments, for example the beach
- Allotments, off site community-based allotment. Often in partnership with the local council. Can include an element of sensory gardening
- Shared LINE workshops with the local senior school based on sharing access to resources
- Volunteering in local community settings. For example, the church, community parks, conservation trust areas, if available locally.

One off visits/activities:

- Nature Studies (as above)

- Orienteering, map reading in local areas
- Volunteering in local community settings (as above)

In several schools where LINE is well established and embedded into the overall curriculum approach for school, they have reported that up to 40% of pupils time at school is spent in the natural environment. More generally most pupils appear to have blocks of time in the week where they specifically engaged in activity for which LINE is the leading component. For the purposes of this study an average of 0.5 days per week will be used to quantify how much LINE an individual pupil receives based on activity with specifically focuses on the delivery of 'learning' objectives outside the classroom in the natural environment, as opposed to a more general exposure to the natural environment leading to incidental learning.

For some pupils where LINE is well embedded in the curriculum further opportunities to learn in the natural environment are offered through the delivery of other timetabled sessions in an outside space, several of the schools reported that delivery of maths lessons take place regularly in an outside environment. Several of the schools appeared to have a different approach to LINE based on the age range of the pupils. Two schools used extensive amount of LINE to deliver continuous provision for Reception groups, which then influenced the delivery for the rest of the Key Stage 1 groups. For one school the access to daily LINE to deliver the early years foundation stage (EYFS) framework had become so integral they felt that they could not deliver the framework in any other way:

> 'We are able to track from reception to Year 2 that they are much more responsive to learning and they are much more independent with their learning and resourcefulness. They are better problem solvers and don't just give up on things quite so quickly. They are more independent learners'.

The areas schools have developed for LINE have offered additional and unexpected benefits. One school has found that parents that were nervous about their child returning to the school setting post Covid were supported by staff to attend LINE sessions with their child as a transition back to school. Staff reported that being outside helped to calm the parents, ultimately making the transition back to school a positive one for all involved. Regardless of the type of LINE offered each school was able to articulate the positive benefits offered to all through accessing the natural environment:

> 'To walk through fields, be outside, and for people to be able to work together, and play together in the fields has been such a benefit to wellbeing for staff and children'.

7.2 Changes experienced by pupils

All schools were positive about LINE. Analysis of the interviews found a wide variety of themes which are mostly agreement with the literature reviewed at the start of the study.

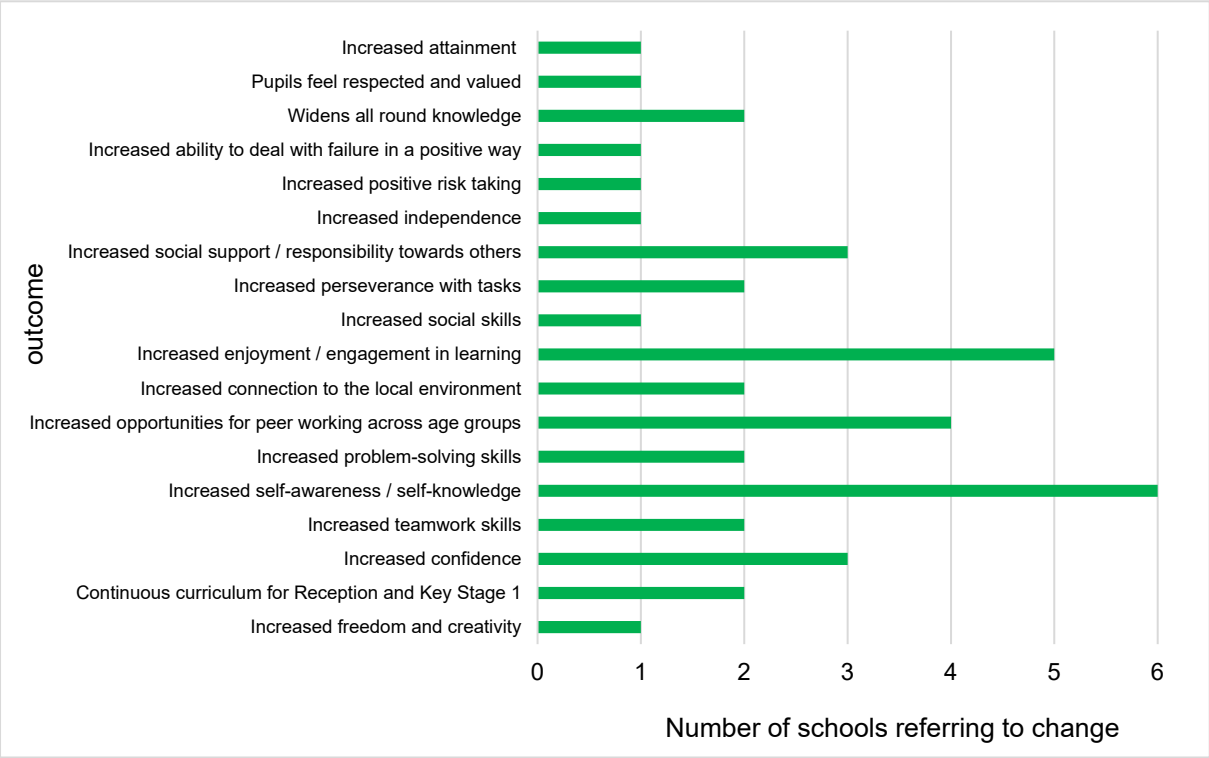


Figure 2: Frequency of school reference to pupil outcomes from LINE

The emerging narratives and data from the schools suggests that LINE offers children the opportunity to increase their knowledge of themselves, and their self-awareness. This is followed by an increased sense of responsibility towards others, increased confidence, and high levels of enjoyment and engagement in learning. Interestingly, an emerging outcome was the opportunity for increased peer work across the age groups in most of the schools, this could range from recycling to poetry writing. Schools spoke of the role modelling opportunities this afforded older children, whilst the younger children completed tasks side by side with the older children increasing their sense of responsibility.

Participating schools were able to provide valuable insight into the connection between children's experience of LINE and subsequent attainment in the classroom:

> 'One classroom has sliding doors which open onto a bird area. This was developed by the children. Children now find this a calm and meditative classroom. An example is a boy who was struggling with a maths problem said he just looked at the birds, which calmed him down, so he could then do his maths'.

‘A chemistry lesson (separating salt from water) was done outside. Children had total recall of the learning and the spellings they had learned’.

Schools were asked to ask to rate (out of 10) whether they thought LINE had a positive impact on key areas of pupils’ development, the responses were as follows:

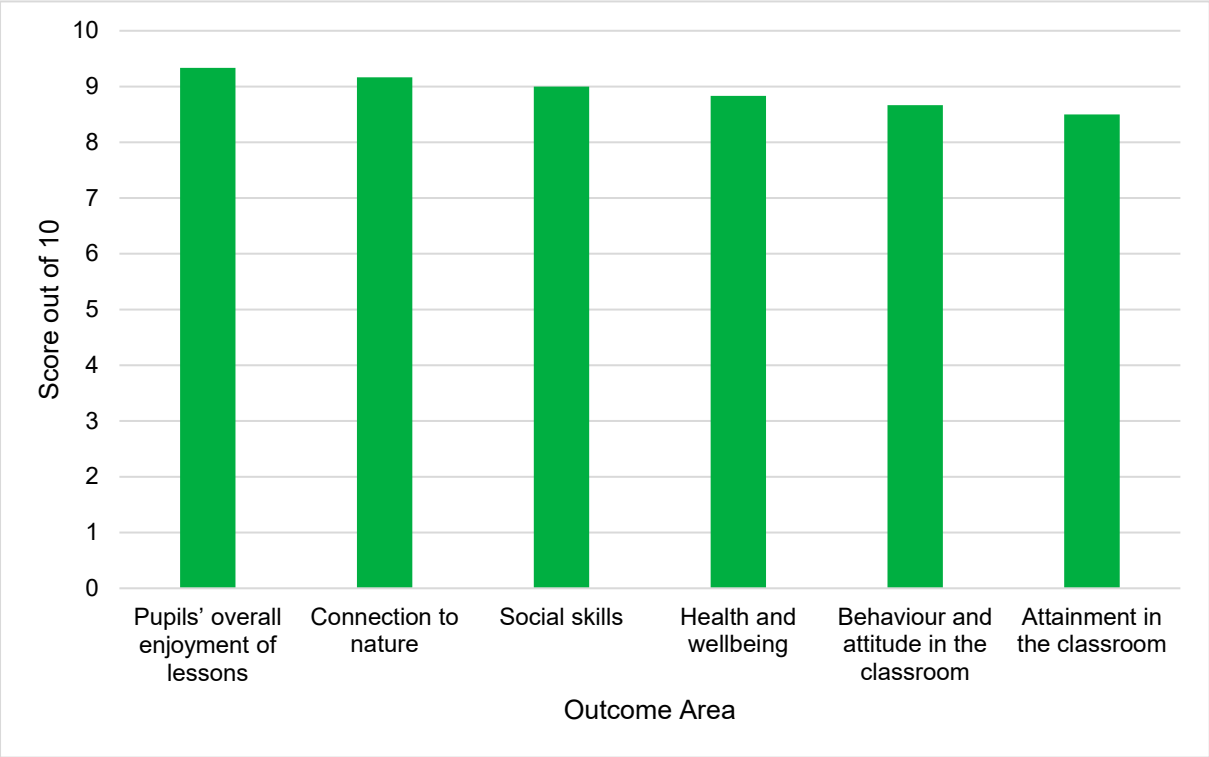


Figure 3: Average of school staff rating of impact on pupil outcomes

The results were overwhelmingly positive, with the majority of schools seeing LINE as absolutely integral to the school’s ability to deliver learning:

‘LINE is woven into everything the school does. It is critical to the ethos, which drives all school activity and the curriculum, and staff recruitment. LINE is at the heart of everything, its impact is very profound’.

Whilst these results need to be treated with a level of caution due to the size of the sample, and the selection method used to contact schools it would appear to conform to the majority of the evidence available for LINE. In line with previous funding the results clearly show that there are concurrent multiple benefits to LINE however it is hard to evidence the impact of LINE on benefits that are not directly related. This is shown by the lower level of confidence in the benefit of LINE on improving attainment in the classroom, compared to enjoyment of lessons. This is reflected in the sensitivity analysis of the SROI in the next section.

7.3 Case Study

This case study shows how LINE can support both cognitive and non-cognitive development in children. This case study demonstrates the positive impact LINE can have in the development of skills that support the child whole learning journey.

Mark is a 5-year-old boy in Reception Class, he found settling into school difficult and had found it hard to make friends. He has Social Skills interventions as his behaviour is often not appropriate towards other children. He also finds it difficult to use language to express his feelings and he has seen a speech and language therapist (SALT). Mark still finds it hard to join in with other children.

During the first learning outside the classroom (LOtC) session Mark was distracted when the LOtC Rules were being explained. He struggled to listen to instructions although he was keen to put his hand up to answer questions. However, he was unable to give the correct answer when asked. Whilst doing the warm-up activity he forgot some of the instructions and then got distracted. When the children were asked to go away in their groups to create their picture, Mark was very keen to get started. He seemed to really enjoy this task and had great ideas and was able to use his ‘treasures’ very creatively. He did, however, find it difficult to be part of a group and discuss his ideas and join in with the group, choosing to create the picture on his own.

As the LOtC sessions progressed Mark was often to be found wandering by himself. When he was given a little encouragement and given suggestions about what he might like to choose to do, he became engaged in an activity, often choosing something creative, and carrying this out independently. When he had finished his activity, Mark often looked as if he would like to join in with a group, but then would just stand on the edge of the group watching the other children without joining in

On the fifth session of LOtC Mark was watching the same group of boys as he had often done. This time the group of boys included George who often played with other children. When George saw Mark watching them, he asked him if he would like to join in with digging the pond. Mark was very excited and got a spade and was soon talking to George and the other boys about the pond that they were digging. In discussion with the others Mark used the words ‘deep’, ‘big’ and ‘across’. This was amazing to watch and hear and he really enjoyed being part of a group.

In the last session before we broke up for the school summer holidays, it was rewarding to watch Mark. Mark was able to do the warm up activity that was to describe a leaf, and then the children were allowed to choose their activities from all our previous sessions. Mark went directly to the same group of children who had decided that as it had rained, they would like to make a mud slide. Mark, after a very brief period of watching, didn’t wait to be asked about whether he would like to join

them or not, he just joined in straight away laughing and playing alongside the others.

7.4 Changes experienced by staff

Staff are responsible for making judgements regarding pupil progress based on their observations. Staff are also expected to experience an impact where supporting pupils to access LINE provides opportunities to enhance their own health and wellbeing, and to develop their professional practice. School management teams should provide an overview for a whole school approach to LINE, where changes to both the curriculum and learning objectives can be thoroughly embedded. In this way, any changes that can be attributed to LINE are clearly visible.

All of the schools that took part in the consultation clearly invested in the development of staff to ensure successful delivery of LINE in the school setting. When asked about investment two clear themes emerged, CPD and the funding of additional / external resources:

Continuous Professional Development included:

- Offering Level 3 Outdoor Learning Co-ordinator qualifications to staff
- Offering Forest Schools specific training and qualifications to staff
- Risk benefit training for staff
- Purchase of specific online LINE training modules
- Training for Learning Support Workers

The funding of additional areas and external resources included the following activities:

- Staff are allowed to pick their own areas of interest and expertise to develop for LINE, for example bee keeping
- Funding is made available for a wide range of workshops, for example, visiting sculptor and an outdoor Shakespeare week.

Although all schools can show that they are clearly investing in staff which leads to a positive overall impact some schools have reported that there can be a phase of resistance when changes are introduced. One school commented that some staff simply don't like being outside:

> 'Initially it was necessary to overcome resistance from older staff, but everyone is now on board with it, and attainment levels have gone up'.

Schools do not typically monitor the impact of LINE on staff wellbeing, the focus is very much on the difference that children experience. Typically, the narratives shared by the schools seem to suggest that staff are very enthusiastic about LINE,

but this appears to be driven by the positive impact LINE has on the children. When asked directly to rate the impact of LINE on staff all the responses were very strong, with the majority of schools scoring the maximum for positive impact across all key areas. Although this is very positive, it was harder to get a clear understanding from schools as to why they thought this was the case. This was in contrast to pupil outcomes where there were a wide range of outcomes, examples, and evidence that all schools could provide.

Schools were asked to ask to rate (out of 10) whether they thought LINE had a positive impact on key areas of the staff experience, the responses were as follows:

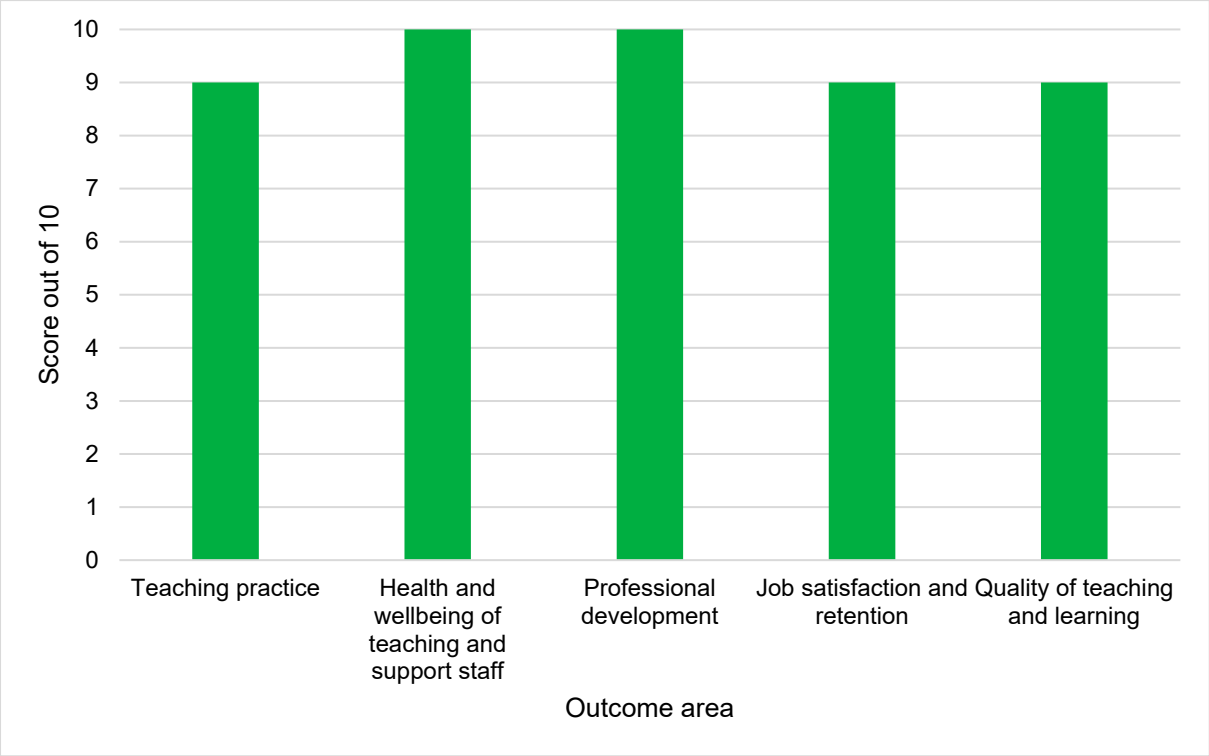


Figure 4: Average of school staff rating of impact on staff outcomes

The small sample size and the fact that the schools involved in the study were already committed to implementing LINE curriculum may influence the positive findings, however the data still demonstrates a trend towards enhanced staff outcomes that is in line with improvements found in previous studies. Further consultation is needed to flesh out the narratives around the impacts of LINE on school staff.

It has become clear through the consultation that teachers and support staff value LINE as a crucial way to deliver both cognitive and non-cognitive learning for children. It allows for opportunities to consolidate key curriculum themes, maths, and English skills, as well as offering freedom for children to create worlds, and learning opportunities of their own. One school summed up the overall difference LINE makes to both pupils and staff as:

‘A positive win-win situation. Children like leaning outside as nature is unpredictable, making the children curious as to what they will see, and what they will learn. Line is empowering and joyful for all involved’.

8. Impact

8.1 Valuing Outcomes

To calculate social value, we need to identify suitable proxy values relevant to the outcome that has been experienced. At times this can be a straightforward process, for example, if a cost saving is identified. However, other outcomes are more subjective. When identifying proxies, it is important to remember that it is not about money changing hands, it also doesn't matter whether the stakeholders in question could afford to buy something. It is about the value that an individual would place on experiencing a particular outcome.

The process of valuing outcomes is often referred to as monetisation because we assign a monetary value to things that do not have a market price. Most of the outcomes reported by the stakeholders cannot be given a specific proxy value, as they are often less tangible. For these the closest comparable value of a product or service with a market price has been identified.

Proxy Selection (Methodology)

The proxy has been selected from one of three credible, nationally recognised, and highly legitimate sources defined under:

- Government
- Accademia
- Think Tank data.

Where there are several possible sources that could be used for a metric, the source has been selected based on the strongest relevance to the metric and that it is the most recent data source available.

The Social Value Business utilises a wide range of proxies that align as closely as possible with the identified outcome and impact. It is a frequent requirement to use proxies that are an indicator of the value created, this is because the bank of proxies available in the UK does not extend to every type of impact and value creation as yet. The proxies are chosen based on their level of validity and appropriateness. This is a standard approach when measuring impact and emphasises the need for stakeholder consultation to reinforce proxies.

8.2 Social Return on Investment

In undertaking this study and calculating these values the principles of SROI have been considered to account for the value of learning outside the classroom in the

natural environment in the most reliable way. To ensure that impact was not over-claimed a range of external factors were considered, some of which were established during the semi-structured interviews, and some through research into existing SROI studies for similar programmes and outcomes. This information is presented as a value map in the Appendix (a separate document available for download).

Deadweight

This is a measure of the amount of outcome that would have happened even if the activity had not taken place, it is calculated as a percentage. In the absence of a control group or benchmark, deadweight is calculated as an estimate considering what people said during the consultations and considering other services within the area. During the interviews with schools, we asked what would have happened if children were unable to access LINE. It was generally thought that the learning opportunities would not be as good without LINE, interestingly the impact was thought to be particularly significant in Reception and Key Stage 1. Based on this deadweight has been estimated at 55% for both pupils and staff, and 30% for volunteers. This is shown in the value map column N.

Displacement

This is an assessment of how much the outcomes from learning outside the classroom in the natural environment could have displaced other outcomes that might have arisen in the absence of it. Given that LINE appears to enhance other outcomes it is felt that there was minimum displacement for any of the outcomes identified. Based on this displacement has been estimated at 1% for all areas. This is shown in the value map column O.

Attribution

In many cases outcomes that occur are not due to a single activity but can be the result of another provision or participation in other activities. To avoid over-claiming, attribution analysis is used to estimate how much other people or activities are perceived to have contributed to the identified outcomes. This is particularly important for learning outside the classroom in the natural environment as in many cases the provision is interwoven with the whole school curriculum. Based on the feedback during the interviews with school attribution has been estimated at 40% to 65% across different outcomes experienced by pupils, staff, and volunteers. This is shown in the value map column P.

Duration and Drop off

For most activities as each year goes by, the outcome amount is likely to lessen or be influenced by other factors. Therefore, attribution to the service is lower meaning the duration of the outcome needs to have a cut-off point. In the case of learning

outside the classroom in the natural environment this has been particularly difficult. This is due to the embedded LINE activity that is delivered by the schools in the sample having a year-on-year impact on the child. As this is an exploratory study and due to the need to create a baseline for SROI in this field drop off has been estimated at 66% across all outcomes, and the duration of the outcomes has been estimated at 2 years. This is shown in the value map column Q is drop-off, and duration is columns T to X. It is clear that the impact is likely to last for more than two years however given the context of this study and the data available to us we have chosen to err on the side of caution to avoid any possible overclaim of impact.

8.3 Calculating the SROI

This study presents this information as a social value map in the Appendix (a separate document available for download). A social value map draws together all the outcomes experienced by individuals, and attributes proxy values to monetise the outcomes experienced by individuals. The social value map then clearly shows how impact is calculated by applying the calculated discounts describe in section 9.2. The quantity columns in the value map are based upon the number of individuals [pupils, teachers or volunteers] and the number of years that the impact will be retained. The quantity of individual benefit (column I in the Appendix) is based on a proportion of the average number of pupils in a primary school [270]. The percentage of pupils benefitting from LINE interventions is calculated by Social Value Business using UK Social Value Bank methodologies and incorporating views from stakeholders in the study to decide the likely number of beneficiaries in an 'average' school. It is recognised that the sample of schools was relatively small and the number of beneficiaries is likely to differ between schools. The estimates provide a starting point for further refinement and investigation in future studies.

The social value map details the amounts for each outcome then applies the deductions from the financial proxy values for attribution, deadweight, displacement and drop off. In addition, discounting has been applied to any values that have been projected to last for longer than one year. The discount rate of 40% has been applied, this is in line with the standard approach that is taking to discounting. It also takes into account several factors such as LINE reducing into secondary school, and the amount of LINE that a pupil receives can vary greatly from school to school.

This rate has been selected as it allows for the lack of robust evidence that links LINE to the outcomes experienced by the stakeholders. As the relationship between LINE and the outcomes experienced by all stakeholders is confirmed through research this value can be significantly reduced.

The social value map also includes the inputs as described in section 7.1. Learning outside the classroom in the natural environment is funded through the allocation of resources from a school’s core funding. For the scope of this study this equates to

£480.10 per pupil, or £129,624.56 per school. This is made up of the cost to the school of delivering LINE including salaries, transport costs, supplies, and services, together with an average estimate of the use of volunteers (see table 4).

The overall value of the outcomes as described in the value map, minus the deadweight, attribution, displacement, and drop-off is £531,597.78. Therefore, the SROI calculation for learning outside the classroom in the natural environment is:

Outcome Value from the value map (£560,176.29) / Total Input from Table 4 (£129,624.56) = £4.32p

8.4 Sensitivity Analysis

As SROI involves assumptions and estimations, the process includes sensitivity analysis where changes are made to the base assumptions of key values to see what happens to the social return ratio. The judgements throughout this analysis process have consistently strived to avoid over-claiming and to err on the side of under-reporting the possible outcomes. A lot of the figures used in the value map have been taken directly from government data, and responses to the consultation. However, the sensitivity analysis seeks to provide a challenge to the unavoidable assumptions made at certain stages through the analysis, therefore providing confidence in the results.

Deadweight

A baseline deadweight of 55% was applied as children would still access a variety of learning through their school provision. It was felt that the provision would not be as good as provision with LINE included, nor would the same benefits be expected.

If the deadweight was increased to 70% for all outcomes the ratio reduces to £2.87 for every £1 invested.

Duration

As the outcomes are reinforced each year through further LINE it has been assumed that the outcomes experienced would last for 2 years if no further LINE was delivered.

If the duration was reduced to 1 year the ratio would reduce to £3.47 for every £1 invested.

Drop off

All outcomes are estimated to last for 2 years, and an assumption was made that drop off would be 66%.

If drop off was increased to 75% to account for further external factors, the ratio is reduced to £4.08 for every £1 invested.

If drop off was reduced to 50% to account for further external factors, the ratio increases to £4.70 for every £1 invested.

Displacement

Given that learning outside the classroom in the natural environment appears to enhance other outcomes it is felt that there was minimum displacement for any of the outcomes identified. However, if displacement was increased to 10% of all outcomes the ratio reduces to £3.93 for every £1 invested.

Attribution

Attribution of the benefits experienced by pupils and staff due to LINE has been challenging due to the relationship between LINE and the whole school curriculum. Based on the feedback during the interviews with school attribution has been estimated at between 40% and 60% for pupils, staff, and volunteers.

If attribution was increased to 60% across the ratio changes to £4.05 for every £1 invested.

Range

The sensitivity analysis estimates the social value to be between **£2.87 and £4.70.** So, by changing the elements of duration, displacement, deadweight, attribution and drop off we see a shift within the ratio, but overall LINE still generates a positive social return. However, when we separate the outcomes for pupils and staff, pupils experience a higher rate of social return compared to staff.

We have utilised professional experience and peer reviewed the sensitisation within Social Value Business. The final figures applied to the value map gave a social return of **£4.32 for every £1** invested is a ratio which is felt to be both realistic and substantiated through the consultations.

9. Recommendations

The scope of this study was to confirm the existing outcomes for LINE, and to apply a SROI methodology to those outcomes to establish the impact of the activity. We have learned that children and staff both benefit and greatly enjoy learning outside the classroom in the natural environment, confirming previous evaluations. This has been monetised using SROI methodology confirming a positive SROI.

During the study areas of further interest and activity emerged. These have been noted in a short series of recommendations for further study and included:

- Due to the increased national focus on mental health and wellbeing we expected that more schools would link the benefits of learning outside the classroom in the natural environment to overall health and wellbeing for both pupils and staff. However this did not emerge as strongly as anticipated through the school consultations. The analysis of the interviews with schools showed that staff reported outcomes such as enjoyment, social skills, confidence, and communication more frequently than improved health and wellbeing. Only when a question was phrased in relation to health and wellbeing did the school refer to it.
    - As the overall study shows that most of the outcomes achieved through learning outside the classroom in a natural environment improve children health and wellbeing this would be an immediate area that could easily be addressed by partners already working across this sector, for example, Natural England through partnership with the Council for Learning outside the Classroom. Giving schools support to think about the impact of the natural environment on children's health and wellbeing, and the tools to measure this impact would provide vital evidence to support how this links to the overall programme of learning that best support child development.
- Secondly, it is hard to establish a clear link between learning outside the classroom in the natural environment and subsequent attainment. This is due to the diverse range of activities that schools carry out and the way in which they are linked to learning.
    - A potential area of application for this learning has emerged during this study - the use of LINE in the delivery of the EYFS framework and the provision of a continuous curriculum for reception and during Key Stage 1. The strength of the work being carried out in a number of the schools who took part in interviews could lend itself to the development of further research to look at whether children's attainment is improved by the achievement of non-cognitive outcomes during learning outside the classroom in the natural environment as part of the EYFS curriculum.

10. Conclusion

It is clear from the evidence already available for LINE, and the consultation with key schools that learning outside the classroom in the natural environment is considered to be an important part of the overall learning experience for children in primary school. Staff confirm the notion that pupils enjoy time spent outside and seem to experience more varied social interactions when learning outside as opposed to the classroom.

Due to the scope of this study, it cannot be established whether it is the environment, or the range of activities offered through LINE, or both, that make a difference to the benefits pupils and staff experience. However, it is clear that pupils engage with their peers in different way, together with showing an increased confidence in their abilities to problem solve and learn, and staff report benefits for both pupils, and themselves.

From this study we have understood the variety of benefits LINE has for children in CLOtC Mark schools and those who do not have the CLOtC Mark but have embedded LINE provision. All schools found that LINE supports children to develop their self-awareness and self- knowledge. The development of this key area is followed by an increase in children ability to offer social support to others, and to problem solve with increased confidence.

Emerging benefits included the positive impact of peer working across a wide range of age groups, and the widening of all round knowledge. Staff also report of the individual benefits to themselves and peers, although these are harder for staff to identify compared to benefits for pupils. An area for development would be to link LINE more clearly to health and wellbeing benefits for both pupils and staff.

The forecasted social return on investment draws together the impact of a wide range of outcomes for all stakeholders. The overall social impact evaluation gives a SROI ratio of £4.32 for every £1 invested.

Additional benefits of LINE are clearly highlighted through the case study, where a low-cost universal provision was able to engage a child in learning as opposed to more individualised higher cost alternatives.

This study and forecast has sought to substantiate the claims evidence has made about the impact of LINE through engagement and consultation with stakeholders. All the experiences shared with us have been overwhelmingly positive, some examples illustrating a turning point in a child life that has enabled them to access education in a meaningful way for the first time, or for some children LINE has helped children to sustain their engagement in education where classroom-based methods may have failed.

‘Children realise their place and part in the world outside – they now feel more respected as their ideas are valued and put into action’.

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