



Learning in the Natural Environment (LiNE) by Schools in York

A summary of findings from research into LiNE in York

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Quotes from some of the research participants:

“The confines of the classroom not only restrict movement it also restricts how and what a child can learn”

“The enthusiasm of children and their engagement for learning peaks outdoors. They will definitely remember what they do outside!”

“The dominant children in the classroom are not always the dominant children outside which is really interesting to see other children come into their own in a different environment”

An Insight into Learning in the Natural Environment (LiNE) in York Schools

A Summary of Research into LiNE by Schools in York
using a Mixed Methods Approach

1.0 Introduction

Learning in the Natural Environment (LiNE) is defined as “learning that takes place outdoors in natural environments either within school grounds or within walking distance from school” (Gilchrist et al 2017). It is a specific type of outdoor education which has some sort of basis in nature whether it is using nature as a tool of learning or by experiencing it through open spaces or other type of natural or semi-natural environment.

LiNE has many benefits and may be a mechanism with which to redress the balance of connecting people with nature and the green spaces around them whilst simultaneously improving the lives of teachers and students, from health, interpersonal, and academic perspectives. There is a growing body of evidence (Dillon & Dickie 2012; Richardson et al 2015; Gelsthorpe 2017) that demonstrates the benefits of LiNE to students such as improved behaviour, increased attainment, enhanced confidence, and increased engagement with the subject matter. With a solid foundation of decades of research to support LiNE, attention should arguably now be given to further investigate whether and how to embed LiNE into regular use within schools, and to give practical advice about what can be done to support teachers in the implementation of LiNE. This research focussed on gaining an insight in current LiNE practice in schools across York from the Early Years Foundation Stage (EYFS) to Key Stage 4 (KS4).

1.1 Aims, Objectives & Outputs

The purpose of this research has been framed by the following aims and objectives;

Aims:

- To gather data on LiNE in schools in York
- To understand how York schools use LiNE in practice

Objectives:

To achieve these aims, the objectives of this research are;

1. Develop an understanding of the backdrop to LiNE in York such as LEA policies, support offered, and figures relating to existing levels of LiNE
2. Discover what the barriers (real and perceived) are to teachers in York, and to share their solutions for conducting more or better quality outdoor education
3. Map lessons from the NCDP onto feedback given from York teachers to see how it can further be applied to the York context and support local teachers

Outputs:

Rather than being archived as an inconsequential piece of localised research, this piece of work has produced the following outputs, which are being shared with teachers and schools within York in the hope that these resources may prove to be useful in the furtherment of quality LiNE in York;

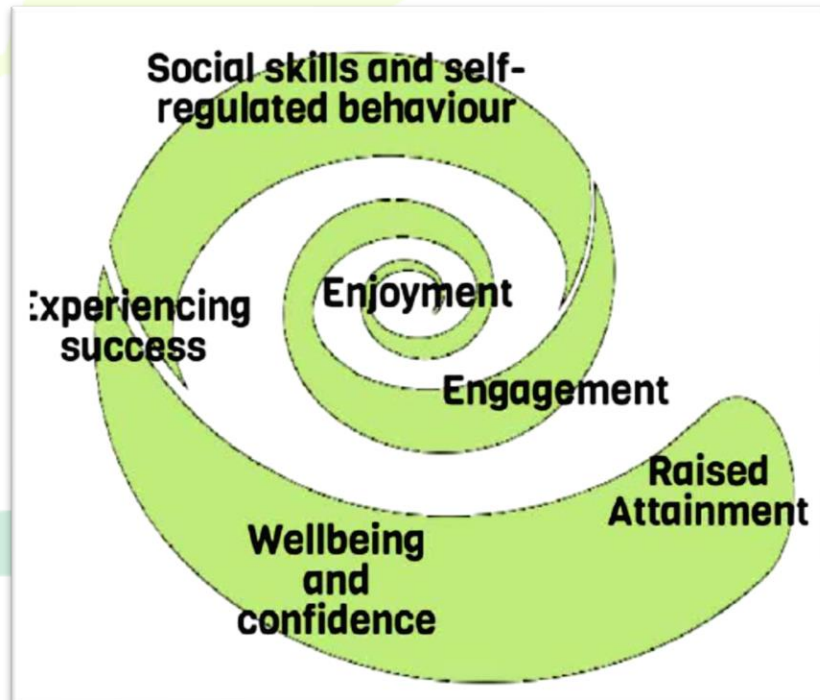
1. Practical suggestions for schools and teachers to help improve their provision of outdoor education
2. A web-based 'directory' of local sources of information and useful information (such as lesson plans to download, or groups with local expertise) to help schools to implement better outdoor education

2.0 Brief Literature Review

2.1 *The Benefits of LiNE*

A growing body of evidence points to the benefits of outdoor education on many levels including academic attainment, confidence, connection with the world around us, and interpersonal skills amongst others. It helps develop a sense of risk management and simply helps to bring the curriculum alive (*Beames et al 2012*). Natural England Evidence Briefings have recently brought a lot of the research evidence together (*Lovell 2016a-g*) and the evidence for the benefits of LiNE is compelling. Physiological and mental health improvements, increasing physical activity and reduced obesity can result from outdoor education (*Ballantyne & Packer 2009*) whilst positive changes to attitudes and behaviours, improved self-worth and developing new skills also have an association with it (*Dillon & Dickie 2012*).

The pathway to raised attainment through outdoor learning



(*Waite et al 2016*)

Within the UK, terminology has changed in recent decades often (though not always) linked with new waves of activity driven by the availability of funding. Common phrases include Learning through Landscapes (LtL), Learning Outside the Classroom (LOtC), and more recently Learning in the Natural Environment (LiNE). Across the world similar examples include the Danish Udeskole program (translated as 'outdoor school'), Earth Education in the USA, and the New Zealand Enviro Schools programme.

2.2 The UK Perspective

The evidence for the benefits of LiNE has been well received and recognised by Local Education Authorities across the country (*Plymouth University 2016*). The UK Government has previously published 'Learning Outside the Classroom Manifesto' (*DfES 2006*), and Ofsted had published its own guidelines on implementing outdoor education (*Ofsted 2008*). A subsequent White Paper called 'The Natural Choice: Securing the Value of Nature' (*Defra 2011*) confirmed the government's commitment to ensure increased education outdoors across England and to make it easier for schools to deliver this.

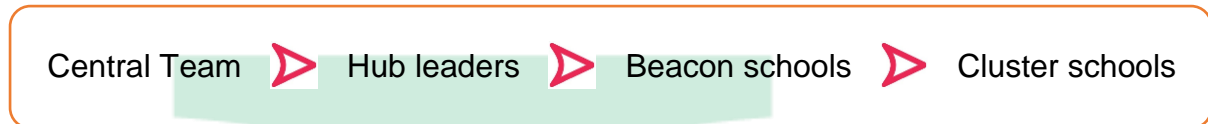
The '**Natural Connections Demonstration Project**' (**NCDP**) was conducted between 2012 and 2016 and was the biggest study of its kind in England into Learning in the Natural Environment (LiNE) by schools (*Waite et al 2016*). Based in the south-west of England over several local authority areas it involved 125 schools (of all ages and types), 2,500 teachers, and 40,000 students. The participating schools report benefits such as improved engagement with learning (92%), better behaviour (85%), improved health and wellbeing (92%), and to a lesser extent but still importantly, improved attainment (57%) (*ibid*).

2.3 Implementation of LiNE in the UK

The NCDP attempted to demonstrate a sustainable delivery method for LiNE using what they termed the 'Distributed Delivery Model'. This model used existing organisations already experts in LiNE, to work with selected schools (called 'Beacon

schools’) to enhance the LiNE that they already undertake. These schools would in turn use their skills and knowledge to support ‘Cluster schools’ which currently use little or no LiNE. The model is as follows;

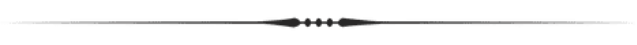
Figure 1: The ‘Distributed Delivery Model’ of the NCDP



(Gilchrist et al 2017a, p.4)

Whilst this model has had some success with the NCDP in the south west of the country it has yet to be seen if a similar model would work in other areas of England or if there is the demand, will or funds to enable a similar project to be run elsewhere. The NCDP lasted for 4 years and had a budget of £700,000 with a further £235,000 of in-kind contributions. For this and other reasons the majority of the findings from the NCDP project are almost irrelevant to the current situation in York, although elements of it may be.

With specific reference to secondary school LiNE the Geography Association (GA) undertook a large body of research in 2016 across 250 schools which found over 50% of geography teachers took Year 7-10 students out of the classroom at least once a year (*Kinder 2016*). Interestingly the majority of off-site trips were led by teachers themselves although there is an increasing number who pay for LiNE providers. Unsurprisingly, although paradoxically, funding was cited as the main barrier to undertaking more LiNE, along with a lack of teacher confidence and the necessary skills. Similarly, other research across all school phases highlights curriculum demands, the fear of accidents, and receiving the appropriate training (*Dillon & Dickie, 2012*) as the biggest barriers.



3.0 Research Design

The data gathering methods had an emphasis on qualitative data with a proportion of quantitative data used to provide a contextual backdrop.

3.1 *Gathering Primary Data*

The majority of this research relies on case studies by gathering personal experiences in outdoor education from teachers and practitioners in schools in York. The data didn't need to focus on the names of schools, teachers, or locations as it is more focused on the perceptions and practicalities associated with LiNE such as the barriers to undertaking more LiNE or the ideas and solutions the teachers have found to overcome them.

1. Interviewing individual teachers

Eleven teachers (n=11) took part in informal interviews, where the participants were encouraged to talk freely and frankly with minimal interruptions or influence other than to ensure that the necessary data was collected.

Framework of Enquiry in both the Interviews and Questionnaire

Intro:	About the school.
Section 1:	Outdoor Education by your school as a whole.
Section 2:	LiNE with your own students.
Section 3:	Positive experiences of LiNE.
Section 4:	Negative experiences of LiNE.
Section 5:	Your experiences using external providers of LiNE.
Section 6:	The logistics of doing outdoor education.

2. Online Questionnaires

To strengthen the data collected during interviews it was decided to devise an online survey which would mirror the interviews themselves. A total of 31 (n=31) respondents completed the questionnaire. The data was then thematically analysed in the same method as the live interviews.

3. Thematic Analysis

The interview data was transcribed then thematically analysed and coded using the constant comparison method (*Neuman 2003*).

3.2 *Gathering Secondary Data*

1. School website & Government 'School Comparison' Service

An analysis of the websites of all the schools that come within York LEA was performed to identify the schools that had a high proportion of references to LiNE (or similar phrases as in [Appendix 1](#)) and therefore were likely to be active in it. The UK government '[School Comparison](#)' website was useful to provide small pieces of contextual data such as the total number of school teachers working in York, and Ofsted report ratings

2. Local Education Authority (City of York Council):

A Freedom of Information (FOI) request to the City of York Council asked for the number of outdoor education sessions by type recorded on their systems for the past 5 years, along with details of any policies, services & systems relating to outdoor education that have been or are still in effect.

4.0 Abridged Findings & Brief Discussion

** Where the data is duplicated or provides no value towards the aims and objectives of this research it has been omitted from this section.*

4.1 **The Secondary Data**

It may seem counterintuitive to start this section with secondary rather than primary data but the logic is that some of the secondary data is used for the basis of finding the best participants for our primary research. This secondary data section includes the data collected from the LEA, members of their H&S team, a FOI request, and from various websites.

1. Local Education Authority (City of York Council):

a. Policies, services & systems relating to outdoor education

The City of York Council Unitary Authority is the Local Education Authority for schools within its boundaries. Its Health & Safety outlines the general organisational responsibilities and accountabilities for H&S across the council. It stipulates that headteachers are responsible for the H&S of “*activities outside school (e.g. educational visits)*” and that they must “*ensure approval of educational visits in consultation with the governors, educational visits co-ordinator and City of York Council procedures, as appropriate*” (City of York Council 2015a, p.10). This is supported by the ‘Educational Visits & Outdoor Activities Policies & Procedures’ document (City of York Council 2007).

Key City of York Council Documents for Educational Visits



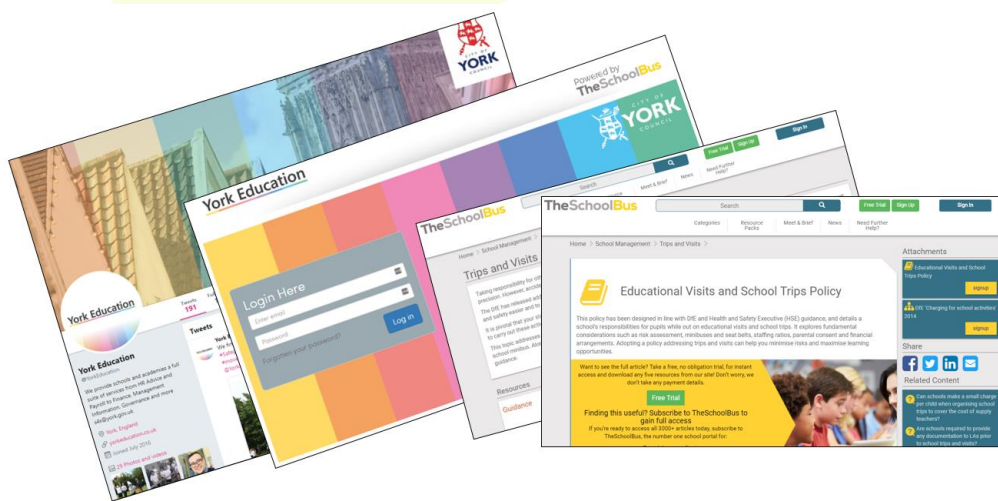
Where schools are run independently of the council they are still encouraged to follow the CYC policies and procedures as best practice, although as long as they follow the applicable H&S legislation the LEA doesn't have any overarching authority or responsibilities. The council also offer an Educational Visits Policy template for local use by the schools should they choose to use it (*City of York Council 2015b*). Since 2003 every school must have a named Educational Visits Co-ordinator (EVC) which may be the school business manager, headteacher, or less frequently a classroom teacher. Within York, the extra training for this is often provided by North Yorkshire Education Services (*website at <http://smartsolutions.northyorks.gov.uk/EVAS>*) costing in the region of £130 (*2018 prices*). The City Council employ a Health & Safety Risk Advisor within the H&S team, which has recently evolved into a shared service between the City of York Council and North Yorkshire County Council.

Non-maintained schools can buy into the general H&S service as well as “*out of classroom educational visits risk assessment support (including the access to Evolve Software, educational visits leader training and competent educational visit adviser)*” for a further £2 per pupil. The [Evolve software](#) (by [EduFocus](#)) is trusted by over 400 establishments across the country and keeps a record of past and planned educational visits of all types ranging from

adventurous residential trips abroad to visits to the local park or bringing various education providers into the school grounds. Discussions with the Health and Safety team for the purposes of this research highlight that despite the potential of the Evolve system there is a disparity between schools across the city whereby some do not use the system at all and some only use it on certain occasions.

City of York Council Health and Safety advice and documents are also available via '[York Education](#)' (based on the '[School Bus platform](#)') on a subscription basis per year. Online training through the [National Governance Association](#) (NGA) website on the responsibilities for educational visits are offered to school governors through the CYC Governance Support and Development Service Training Programme (*City of York Council 2017a*).

'York Education' Website(s) Offering H&S Documents & Advice to Purchase

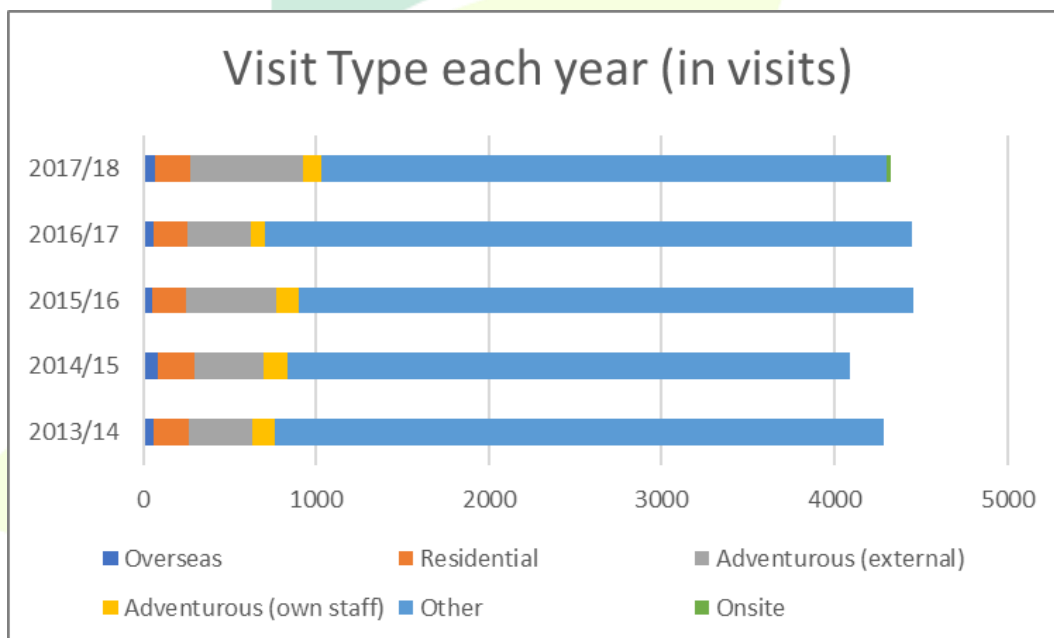


b. Number of outdoor education sessions recorded by City of York Council

A Freedom of Information request was submitted to the City of York Council to request the number of educational visits they have recorded using the Evolve system (or otherwise), over the past five years, and differentiated into their

various types. This data comes with the caveats from the H&S team that not all schools record all visit types on the system; that the overall usage of the system has changed over the past five years; many of the 'Adventurous' activities are going to the local swimming pool; and that the data in general may not be very reliable to show what we hoped it would. Nonetheless, selected data representing the past five years for the total number of visits for each visit type are shown just to give an indication of how the nature of school visits is apportioned and has recently changed.

Total Number of Visits for each Visit Type (2013-18)



Given the limitations of this data we can still see the general trends of the overall number of days spent on educational visits each year since 2013. The 'other' category applies to non-adventurous off-site visits which may include LiNE within walking distance of the school but equally may include a coach trip to an indoor art gallery. It is unfortunate that this category cannot be further subdivided using the data we have. There is also now only a requirement for schools to get their activity 'signed off' by the H&S team in cases of the most high-risk activities (such as residential visits abroad or self-led adventure activities). The data is influenced directly by the number of

schools actually using Evolve system and but also assumes that the same schools that register high-risk activities will also register low-risk activities.

4.2 The Primary Data

Data gathered from teachers was primarily qualitative in nature using the case study approach through verbal and online data collection methods to better understand the issues they face in the implementation of LiNE, and to be able to share their solutions and advice to other teachers. Some of the online data collected was quantitative and gives an indication of where the participants worked (in terms of the type of school) whilst retaining anonymity for them. The qualitative data was thematically analysed whilst considering the need to be able to relate some of the corresponding data collected by the NCDP. The main themes used to categorise the data are as follows:

Themes for the Analysis of Qualitative Data

1. Negative experiences
2. Support
3. External Providers
4. Cost
5. Equipment
6. Training
7. Paperwork
8. Enablers to Successful LiNE

Data from teachers

Verbal case study data was gathered from 11 teachers from various types of school across York, using a combination of semi structured telephone interviews and face-to-face meetings (with the names of individual teachers, schools and

otherwise identifiable data redacted). The response to the request to complete online questionnaires was unsurprisingly better than that to commit to live interviews but still only amounted to 31 online participants. The responses from teachers are extremely valuable in the local context because they are 'rich' and articulate the issues and solutions '*in the real world*'. Many of the concerns or negative experiences correlate in general with those that have been found in the NCDP and previous studies (*for example Dillon & Dickie 2012*).

The following excerpts reflects the most common feedback along with other noteworthy or novel comments from both the online questionnaire and the interviews (a more complete version is in [Appendix 2](#)).

➤ Theme 1: Negative Experiences

Indicative question: What were the main factors that contributed to your negative experiences of LiNE?

The negative experiences shared by teachers were not universal across all teachers but a lot of the negative experiences were shared by others. The NCDP also reported this, indicating that the challenges faced are highly localised to a school or MAT (*Waite et al 2016*). Whilst many issues included the expected concerns about safety, behaviour, cost, resources, toilets, weather, and the administration it was reassuring to see that many of these barriers have been counteracted by advice from other teachers.

Typical responses include:

"The weather changing plans at the last minute and children not always been that resilient, (too cold or too hot complaints)"

"The amount of Risk Assessments particularly if older children and so less parent helpers"

"Attempting to do a range/ more adventurous activities in too short a time with too few staff"

Some comments received were edged with optimism or contained helpful advice:

"Be prepared for any weather - no such thing as bad weather, just bad clothing"

"Children are very good at self-regulating while still pushing their own boundaries"

"Whilst the maybe negatives about what you may find in public sites (such as broken glass), this can be turned into a positive because it's a life lesson that they need to know: that there are things you need to learn to recognise as something you do not touch"

Although cost was mentioned it wasn't done so very often, perhaps with the majority of teachers interpreting LiNE as that which is done within walking distance.

➤ Theme 2: Support

Indicative question: How do/ did the school and other staff support you in implementing LiNE?

The support required to go off-site was summed up by one teacher as:

"Having a reliable volunteer is the clincher that allows us to go off-site"

Our teachers expressed how enthusiasm of teachers, teaching assistants, and volunteers played a big part in the success of their outdoor activities, which has also been reported in the literature (*Unel & Castle 2012*). Three of our respondents had already built such a relationship with parent volunteers who can be relied upon on a weekly basis for their LiNE sessions. Support from within the school in the form of other staff members, or through LiNE being committed to in a School Improvement Plan (SIP) also played a big part. One teacher noticed how LiNE initiated years ago made subsequent LiNE easier year on year.

Other comments of note include:

"Part of the culture/ethos of the school when I arrived. Everyone expected to take part"

"Support in developing forest school in time and budget likewise with outdoor area"

"Providing opportunities to access the multi-use area at another school in the MAT"

➤ Theme 3: External Providers

Indicative question: Which external providers have you used to help deliver or facilitate LiNE? (e.g. Rangers, volunteer groups, local experts etc)

An unexpected comparison with the NCDP is that our teachers tended to lead their own LiNE sessions. Whilst some local groups were used to deliver LiNE on occasion, this was not the norm, but it is not clear if this is to do with financial restrictions, the lack of awareness that the groups exist, or for some other reason. Of those teachers that occasionally used an external provider examples of the providers are as follows;

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- *Gardening someone from Edible York*
 - *Woodland trust*
 - *Local community group - bug hunt*
 - *Natural England staff*
 - *Spouses, relatives, or friends who are experts*
 - *Local farm*
 - *Parent volunteers have helped develop forest school*
 - *Tree surgeon donating logs*

- *Woodland adventure company*
 - *Wild Things Forest Schools*
 - *Park rangers when they were available*
 - *Volunteer groups*
 - *Local experts at a nature park*
 - *Flamingo Land, The Deep*
 - *Forest schools teacher from a different school*
 - *NST for trips abroad*
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➤ Theme 4: Cost

Indicative question: Did they come with any cost and if so was this a key factor in determining if to use LiNE are not?

Only a handful of comments were made in relation to costs which is likely to be a reflection of the fact that teachers in our sample delivered LiNE themselves. Some teachers that did pay for services cited the fact that whether everything is included for them as a key factor (such as snacks, site checks, worksheets, or relevant risk assessments). One teacher noted:

"People underestimate the value of something that they can't measure: for example, interpersonal skills such as negotiation"

Quite simply put, one teacher noted *"It limits the amount we can do"*

➤ Theme 5: Equipment

Indicative question: Tell us about the equipment you use for LiNE: *(Do you have the correct equipment? Do you share resources? Is this a concern for you?)*

One experienced teacher summed this up in the following statement;

"The more stuff you have the less the children are using their imagination so unless it's something you actually need then don't bother taking it (apart from a first-aid kit, telephone and so on)"

Most teachers highlight their lack of resources whilst others highlight that the resources are available but just aren't shared properly or fairly:

"Have a stock of things ready as it is time consuming to gather all the resources"

"[We have equipment] ...but this is not utilised by the whole school"

"Have specialist tools bought/ located and ready to use when needed"

"Waterproof clothing/ including outdoor waterproof trousers is now on the uniform list"

"We have limited resources for learning outside that would be delivered differently from if it were taught indoors"

Some of the more philosophical comments include:

"Less is more. Be resourceful with what you find outdoors"

"Children have very little chance just to play"

➤ **Theme 6: Training**

Indicative question: Tell us about any training you have had or need in relation to LiNE:

In one of the strongest response themes teachers clearly feel they have lack of training in this area. Teacher confidence appears to play a large role in how potential problems are viewed, and it would be logical to link teacher confidence with CPD, collaborating with other teachers, having support from senior leadership, and having help from a supportive TA or volunteer(s) which are echoed in Dillon *et al* (2005) and Dillon & Dickie (2012). Training can help to put things in perspective and in the case of Risk Assessments can help teachers to realise that the Risk Assessments can be adapted from those that already exist and to have confidence in dynamic risk assessments they will use on the day. The NCDP reported how CPD was central to its success (Waite *et al* 2017) but our sample of teachers were actively asking for more CPD and had only received a minimal amount previously;

"Any would be beneficial"

"Would like something more cross curricular - how can I use LiNE in other subjects and make sure learning is secure?"

A lot of teachers rely on personal interests for their specialist knowledge;

"One teacher has a fantastic subject knowledge the rest are self-taught"

"Personal interests (e.g. RHS gardening)"

The formal training that people have had is ad hoc at best;

"Part of Geography PGCE course"

"Forest schools training (varying degrees but lots of it)"

"CPD on maths in the environment"

Cost came up repeatedly with many saying that quality CPD is too expensive, or the cost of cover teachers stops them going on certain courses. Forest schools came under particular fire as being *"prohibitively expensive"*.

In relation to health and safety teachers noted the value in the confidence of their training in using dynamic risk assessments. Two teachers said;

"Reasonable and practical! Always remember these words when considering your risk assessments. They were given to me by a H&S course leader. We are only expected to do what is reasonable and practical to reduce risks; not to do everything possible to eliminate them."

"Have confidence in your dynamic risk assessments. All teachers assess things differently so don't be put off by others"

➤ Theme 7: Paperwork

Indicative question: Tell us about the paperwork involved in LiNE and the influence it has on whether or not you do it?

The theme of 'paperwork' brought mixed responses. For some it was a real barrier and for others it was something that they 'had to do';

"We have ongoing permission to take children out into school grounds"

"Not much paperwork once the risk assessments are done"

"...as we go weekly to our site the time is outweighed by the benefit"

Others also noted that paid providers would do this for them and was a price worth paying;

"External providers remove a lot of the burden associated with organising LiNE"

*"[A provider] did a work shop and all the risk assessments etc were complete: so much easier and quicker **so sadly this then gets more votes** compared with the teachers doing all the work planning a trip independently for example"*

Other comments to note are;

*"Risk assessments, site visits - puts me off **but doesn't stop me doing it**"*

"This puts me off: Permission slips, risk assessments, letters to volunteers/ volunteer help, specialist support, planning time, site visits, bookings, Evolve, Risk assessments, health forms, coordinating staff, policy for outdoor area, CPD for staff"

"Does affect how frequently I can focus on new projects outdoors"

➤ Theme 8: Enablers to Successful LiNE

Indicative questions:

a) If you had to repeat these outdoor learning activities what would you do differently this time around?

b) Please give your top tips and advice for other teachers wanting to implement LiNE:

There were many tips provided by the teachers ranging from resisting the temptation to do too much too soon to making sure you project your confidence outdoors and learning to trust your students in that environment. Many philosophical words were spoken by those teachers who were confident outdoors such as;

*"Children are more receptive and **all senses are engaged** when working outdoors"*

"It's good for your soul"

We can look at these comments in two sections dealing with practical issues and those of a more philosophical nature.

Practical:

Plenty of tips were offered about the practicalities of going outside the classroom. Examples include;

"Get to know your local area. Look closely on a map and you may be surprised what you have on your school's doorstep or discover footpaths that take you somewhere you thought was out of reach"

There was mixed advice about how to treat the outside;

"Don't try to do 'inside' work outside - adapt it on a bigger scale for outdoors"

"Just do everything outside as if it's a normal classroom. We take books and mini writing boards and go to our outdoor area. No special planning needed"

"Think laterally - treat it as an outside classroom!"

Other advice of note includes;

"Make sure I know what I want the children to learn and how I want them to do this"

"As you would expect the first time the children go out you will need to get used to being outside as a class, the children need to know the boundaries, and the teachers need to know what the children can be trusted to do"

"...make sure you set physical boundaries to contain the children"

"Using the same outdoor space gives them confidence and a sense of ownership"

"Take lots of photos to show what the children have achieved"

Philosophical:

When considering the philosophical, personal, and emotional advice there was a wide range from simple things like;

"Be enthusiastic - children 'catch' it"

"Keep an open mind. Don't be afraid to try new things"

"Feel relaxed about letting the other children just play"

...all the way to;

"The more you do it the more confident you become and the better the children respond"

"Children are more receptive and all senses are engaged when working outdoors"

"Children are more joyful and 'free' they experience nature and seasons in a real and meaningful way"

The best of the rest quotes are as follows;

"The dominant children in the classroom are not always the dominant children outside which is really interesting to see other children come into their own in a different environment"

“The confines of the classroom not only restrict movement it also restricts how and what a child can learn”

“The enthusiasm of children and their engagement for learning peaks outdoors. They will definitely remember what they do outside!”

4.4 The next steps

Following on from this research there are a number of things that could, should, and may happen next:

The short-term:

In the short term, the data from this research has been shared with all schools across York with the potential of schools learning from each other and listening to the experiences shared by teachers who have found solutions to existing problems (see [Appendix 2](#)). I will remain active in the LiNE field and can be contacted to discuss the findings in more detail.

The NCDP report gives several findings and suggestions that could be applicable and transferable to York schools (see [Appendices 3&4](#)) and it is reassuring that the experiences of York teachers largely align with those of teachers in the NCDP. The suggestions are based on solid research from a large dataset from a project which experimented with several methods of implementation across hundreds of schools, and coupled with the suggestions carved from the experiences of teachers in York, form a strong foundation with which to develop LiNE further. Some caution will need to be exercised however in recognising the differences between the NCDP and schools in York in terms of it's scale, scope, and financial backing.

Throughout this research many useful websites have been visited. If the websites gave information or resources that would be useful to schools and teachers in their implementation of LiNE, then they were noted in a spreadsheet together with the item(s) of value that they offered. This formed the basis for the second website associated with this research which is called '**Outdoor Education Resources**' and

can be found at <https://OutdoorEducationResources.UK/>. After a brief thematic analysis of the resources to be included in the website, the structure is as follows;

Structure of the Outdoor Education Resources website:

- **York-Specific Resources**
 - Lesson Plans & Resources
 - Providers (info or activities to contact)
 - Green Sites
 - Other useful Information (H&S etc)
- **Non-Local Resources**
 - National what day
 - National Initiatives (OpAL, Spring watch etc)
 - Lesson Plans & Resources
 - Providers (info or activities to contact)
- **Professional**
 - Journals
 - Associations
 - Research into LiNE
 - Training

The medium-term:

If the will, time, and momentum is present perhaps a more co-ordinated approach to LiNE in York could be developed to make the best use of the efforts of individuals and reduce repetition. In the medium term there may be scope for funding applications to facilitate a smaller scale project similar to the NCDP but developed to meet the specific needs and circumstances of York schools. The active 'green spaces' groups within York may also be interested in supporting this. There also exists a lot more potential for further research into LiNE in York.



5.0 Conclusion

We have seen from the literature that the various benefits of outdoor education are widely accepted although when we narrow the focus to the specific LiNE branch of outdoor education specifically in the UK the literature becomes sparse. The NCDP was the biggest ever piece of research into LiNE and we are still gathering data and learning from it. Within the City of York our mixed methods research indicates that there is good support from a legislative and health and safety perspective for York schools and teachers that actively participate in LiNE. Our case study data indicates that the barriers that teachers face are very similar to those faced by teachers across the country, although they are not all universal and are highly localised to the school. Our teachers shared various solutions for overcoming these barriers and in general were optimistic and enthusiastic about LiNE. In our sample there seems to be an acute shortage of CPD with teachers expressing that they wished they could have LiNE specific training, or those that had previously had some saying that it was up to a decade ago. The literature recognises the pivotal role CPD has on implementing LiNE and it also suggests key underpinning characteristics of schools that implement a successful LiNE program which were lacking in data from our sample of teachers. These include the use of LiNE across the curriculum, a whole school approach to LiNE and support from senior management. The NCDP (*Waite et al 2016*) goes on to list several characteristics that underpin successful LiNE implementation although in our sample most cases are the opposite. For example, most schools lacked positive staff culture towards LiNE, have a limited collaboration with other schools and struggled spreading LiNE across the curriculum (*Rickinson 2012*).

In the national context it is an interesting time for LiNE and the full ramifications from the NCDP are yet to be seen with data still to be collected and the longevity of the project to be determined. In a local context this research will hopefully be well received by the active environmental groups and more importantly the schools and teachers who will be implementing LiNE for the benefit of their students in terms of their health, well-being, and academic attainment.

References

(key literature is highlighted)

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Appendices follow:



Appendices

Appendix 1: Keywords Relating to LiNE Used in Website Research



Countryside Education
Countryside Learning
Countryside Pedagogy
Earth Education
Education in Natural Environments
Education in Nature
Education in the Natural Environment
Education Outdoors
Education outside the class
Education Outside the Classroom
Educational visit
Environmental Education
Environmental Pedagogy
Experiential Education
Experiential Learning
Experiential Pedagogy
Fieldwork
Forest Schools
Learning in Natural Environments
Learning in Nature
Learning in the Natural Environment
Learning in the Outdoors
Learning Outdoors
Learning outside the class
Learning Outside the Classroom
Learning through Landscapes
Learning through Nature
Learning through Outdoor Experience
LOTC

Nature based education
Nature based learning
Nature based pedagogy
Nature based schooling
Nature based teaching
Nature Pedagogy
Nature-based education
Nature-based learning
Nature-based pedagogy
Nature-based schooling
Nature-based teaching
Outdoor Classroom
Outdoor Education
Outdoor Learning
Outdoor Pedagogy
Outside Learning
Outside Pedagogy
Teaching in Natural Environments
Teaching in Nature
Teaching in the Natural Environment
Teaching Outdoors
Teaching Outside
Teaching outside the class
Teaching Outside the Classroom
Udeskole
Woodland Education
Woodland Learning
Woodland Pedagogy

Appendix 2: Summary of Key Findings about LiNE by York Teachers

Broad theme:	1) Negative experiences
Indicative Question:	What were the main factors that contributed to your negative experiences of LiNE?
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ <i>"Be prepared for any weather - no such thing as bad weather, just bad clothing"</i> ✓ <i>"Go in Summer for better weather!"</i> ✓ <i>"Have a stash of spare gloves in case it's cold"</i> ✓ <i>"Think about rest places and routes carefully"</i> ✓ <i>"Whilst the maybe negatives about what you may find in public sites (such as broken glass), this can be turned into a positive cos it's a life lesson that they need to know: that there are things you need to build to recognise as something you do not touch"</i> ✗ <i>"It never crossed my mind that we may find needles in the bushes and that highlighted my naivete. Now, depending on where we are going, I'll show the children a needle and just like glass, litter, or dog poo they know not to touch it. I did a basic drug awareness course at the council so on the rare occasion we do find a needle I can either report it or safely put it in my sharps box. It sounds scary but now the children and I are prepared it isn't a great concern."</i> ✗ <i>"The weather changing plans at the last minute and children not always been that resilient, (too cold or too hot complaints)"</i> ✗ <i>"Resources for more adventurous/ building activities"</i> ✗ <i>"Lack of toilets nearby"</i> ✗ <i>"Transporting equipment/ resources to outdoor area"</i> ✗ <i>"The amount of Risk assessments particularly if older children and so less parent helpers"</i> ✗ <i>"Cost to get to a location"</i> ✗ <i>"Own subject knowledge"</i> ✗ <i>"Admin involved in taking students off site"</i> ✗ <i>"Sometimes the links between the subject and outdoors are tenuous so the learning is not strong"</i> ✗ <i>"Children's' safety, behaviour management"</i> ✗ <i>"Attempting to do a range/ more adventurous activities in too short a time with too few staff"</i> 	

(continued...)

Broad theme:	2) Support
Indicative Question:	How do/ did the school and other staff support you in implementing LiNE?
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ <i>"Built into SIP. The whole school is keen to develop more LiNE opportunities"</i> ✓ <i>"Part of the culture/ethos of the school when I arrived. Everyone expected to take part"</i> ✓ <i>"A positive and enthusiastic teacher/ TA"</i> ✓ <i>"We are actively encouraged. We have a forest school leader"</i> ✓ <i>"Time out of school to train & prepare"</i> ✓ <i>"Support in developing forest school in time and budget likewise with outdoor area"</i> ✓ <i>"Providing opportunities to access the multi-use area at another school in the MAT"</i> ✓ <i>"Even in the school grounds try to get a second adult just in case you forgot something, or simply because the children are more spread out"</i> ✓ <i>"Extra members of staff or adults"</i> ✓ <i>"We had a big push on outdoor maths last year and using our surroundings to help children learn"</i> ✓ <i>"Having a reliable volunteer is the clincher that allows us to go off-site"</i> ✓ <i>"If you don't have access to a TA, try to get a reliable parent you can train up. Having another pair of hands makes a huge difference to what you can achieve"</i> ✓ <i>"Having a reliable volunteer is the clincher that allows us to go off-site"</i> <p>✗ -</p>	

(continued...)

Broad theme:	3) External providers
Indicative Question:	Which external providers have you used to help deliver or facilitate LiNE? (e.g. Rangers, volunteer groups, local experts etc)
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ "Gardening someone from Edible York" ✓ "Woodland trust " ✓ "Local community group - bug hunt " ✓ "Natural England staff" ✓ "Spouses, relatives, or friends who are experts" ✓ "Local farm" ✓ "Parent volunteers have helped develop forest school" ✓ "Tree surgeon donating logs" ✓ "Woodland adventure company" ✓ "Wild Things Forest Schools" ✓ "Park rangers when they were available " ✓ "Volunteer groups" ✓ "Local experts at a nature park" ✓ "Flamingo Land, The Deep" ✓ "Forest schools teacher from a different school" ✓ "NST for trips abroad" <p>✗ -</p>	

Broad theme:	4) Cost
Indicative Question:	Did they come with any cost and if so was this a key factor in determining if to use LiNE are not?
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ "Cost shared between parents and school" ✓ "Wild Things yes charged us, but Park Rangers didn't" ✓ "Included in price" ✗ "It limits the amount we can do" ✗ "People underestimate the value of something that they can't measure: for example, interpersonal skills such as negotiation" ✗ "Yes, it was expensive, but the children got so much out of it that we have made it a yearly occurrence" 	

(continued...)

Broad theme:	5) Equipment
Indicative Question:	Tell us about the equipment you use for LiNE: (Do you have the correct equipment? Do you share resources? Is this a concern for you?)
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ <i>"Use a trolley to transport equipment"</i> ✓ <i>"Waterproof boxes for clipboards, pencils, etc."</i> ✓ <i>"Have a stock of things ready as it is time consuming to gather all the resources"</i> ✓ <i>"Have specialist tools bought/ located and ready to use when needed"</i> ✓ <i>"Waterproof clothing/ including outdoor waterproof trousers on uniform list"</i> ✓ <i>"Less is more. Be resourceful with what you find outdoors"</i> ✓ <i>"The more stuff you have the less the children are using their imagination so unless it's something you actually need then don't bother taking it (apart from a first-aid kit, telephone and so on)"</i> ✗ <i>"Sharing resources, always lacking"</i> ✗ <i>"[We have equipment] ...but this is not utilised by the whole school"</i> ✗ <i>Children have very little chance just to play"</i> ✗ <i>"We have limited resources for learning outside that would be delivered differently from if it were taught indoors"</i> 	

(continued...)

Broad theme:	6) Training
Indicative Question:	Tell us about any training you have had or need in relation to LiNE:
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ <i>"Reasonable and practical! Always remember these words when considering your risk assessments. They were given to me by a H&S course leader. We are only expected to do what is reasonable and practical to reduce risks; not to do everything possible to eliminate them."</i> ✓ <i>"Have confidence in your dynamic risk assessments. All teachers assess things differently so don't be put off by others"</i> ✓ <i>"Part of Geography PGCE course"</i> ✓ <i>"Reasonable and practical! Always remember these words when considering your risk assessments. They were given to me by a H&S course leader. We are only expected to do what is reasonable and practical to reduce risks; not to do everything possible to eliminate them"</i> ✓ <i>"One teacher has a fantastic subject knowledge the rest are self-taught"</i> ✓ <i>"Personal interests (e.g. RHS gardening)"</i> ✓ <i>"Forest schools training (varying degrees but lots of it)"</i> ✓ <i>"CPD on maths in the environment"</i> ✓ <i>"Occasional forest schools network meetings, some more useful than others"</i> ✗ <i>"Would like something more cross curricular - how can I use LiNE in other subjects and make sure learning is secure?"</i> ✗ <i>"Any would be beneficial"</i> ✗ <i>"Would like to do more"</i> ✗ <i>"Forest schools training is prohibitively expensive"</i> 	

(continued...)

Broad theme:	7) Paperwork
Indicative Question:	Tell us about the paperwork involved in LiNE and the influence it has on whether or not you do it? (e.g. <i>Permission slips/risk assessments/volunteer help/specialist support/planning time/site visits etc.</i>)
<p><u>Key Quotes:</u></p> <ul style="list-style-type: none"> ✓ "We have ongoing permission to take children out into school grounds" ✓ "Not much paperwork once the risk assessments are done" ✓ "as we go weekly to our site the time is outweighed by the benefit" ✓ "External providers remove a lot of the burden associated with organising LiNE" ✓ "When we first started about 10 years ago we adapted risk assessments from an education pack" ✓ "[A provider] did a work shop and all the risk assessments etc were complete ✓ - so much easier and quicker so sadly this then gets more votes ✓ compared with the teachers doing all the work planning a trip independently for example" ✗ "This puts me off: Permission slips, risk assessments, letters to volunteers/ volunteer help, specialist support, planning time, site visits, bookings, Evolve, Risk assessments, health forms, coordinating staff, policy for outdoor area, CPD for staff" ✗ "Does affect how frequently I can focus on new projects outdoors" ✗ "...takes a lot of time for off site visits so we only do 2 compulsory ones for GCSE" ✗ "Risk assessments, site visits - puts me off but doesn't stop me doing it" 	

(continued...)

Broad theme:	8) Enablers to Successful LiNE
Indicative Question:	<p>a) If you had to repeat these outdoor learning activities what would you do differently this time around?</p> <p>b) Please give your top tips and advice for other teachers wanting to implement LiNE:</p>
Key Quotes:	
<ul style="list-style-type: none"> ✓ <i>"Make sure I know what I want the children to learn and how I want them to do this"</i> ✓ <i>"Take more time to do the same activities in smaller groups"</i> ✓ <i>"Feel relaxed about letting the other children just play"</i> ✓ <i>"Research more... be bolder e.g. rivers and coast topic actually visit a coast rather than rely on [the easy option]"</i> ✓ <i>"Safety (sun, nettles, keeping children in one area, plants/berries not to be eaten, etc)"</i> ✓ <i>"Think laterally - treat it as an outside classroom!"</i> ✓ <i>"Be enthusiastic - children 'catch' it"</i> ✓ <i>"Don't try to do 'inside' work outside - adapt it on a bigger scale for outdoors"</i> ✓ <i>"Children need to be equipped with suitable outdoor wear to permit activities throughout the year"</i> ✓ <i>"As you would expect the first time the children go out you will need to get used to being outside as a class, the children need to know the boundaries, and the teachers need to know what the children can be trusted to do"</i> ✓ <i>"It took a few months for them to fully settle into it but now they are probably better behaved outside than they are inside"</i> ✓ <i>"The more you do it the more confident you become and the better the children respond"</i> ✓ <i>"Be cautious when a new child joins the class because they won't have built up the exposure that the other children have"</i> ✓ <i>"Just do everything outside as if it's a normal classroom. We take books and mini writing boards and go to our outdoor area. No special planning needed"</i> ✓ <i>"make sure you set physical boundaries to contain the children"</i> ✓ <i>"Get to know your local area. Look closely on a map and you may be surprised what you have on your school's doorstep or discover footpaths that take you somewhere you thought was out of reach"</i> ✓ <i>"Using the same outdoor space gives them confidence and a sense of ownership"</i> ✓ <i>"Children are more receptive and all senses are engaged when working outdoors"</i> ✓ <i>"Children are more joyful and 'free' they experience nature and seasons in a real and meaningful way"</i> ✓ <i>"Be prepared"</i> ✓ <i>"Have boundaries and clear expectations of learning before using LiNE"</i> ✓ <i>"Make sure the links are strong and not tenuous to get the most out of using LiNE"</i> ✓ <i>"Take lots of photos to show what the children have achieved"</i> ✓ <i>"Build it into each topic as a focus for learning and try to do different topics"</i> ✓ <i>"Keep an open mind. Don't be afraid to try new things"</i> ✓ <i>"It's good for your soul"</i> ✗ - 	

The following **2 appendices** are taken directly from the finding from the **Natural Connections Demonstration Project (NCDP).**



The suite of Reports from the Natural Connections Demonstration Project 2012-16

Some findings of the NCDP **may be transferable** and therefore **relevant and of use** to York schools;

- i. Ways to embed LiNE into school practice
- ii. Challenges to schools
- iii. Forms of teacher confidence
- iv. Roles of CPD and types of CPD related to LiNE
- v. Types of LiNE practices
- vi. Characteristics of schools most likely to engage with LiNE
- vii. A pattern of adoption of LiNE
- viii. Characteristics of successful LiNE implementation
- ix. Methods of embedding LiNE activities in schools
- x. How schools were supported in overcoming barriers they faced

Appendix 3: Headline findings of the NCDP on school implementation of LINE

- The project assumption that there is a latent demand for LINE in schools was confirmed.
- Schools most likely to engage with LINE displayed strong leadership for LINE and were open minded about trying new things.
- There were statistically significant increases in LINE activity over the timescale of the project. The evidence suggested this was likely to be sustained.
- Initial LINE development in schools focused on activity delivered within school grounds rather than local greenspaces.
- Schools adopted many different models of LINE implementation, with anything from a few, many or all of the staff involved with LINE. In all cases, implementation was dynamic and changed regularly as staff broadened and deepened their LINE practice.
- The characteristics that underpinned and reflected successful LINE implementation were:
 - creation of a positive staff culture towards LINE (including confidence and wider recognition and reward)
 - significant growth in school aspirations for LINE
 - enhancing teaching practice across the curriculum
 - collaboration and networking with other schools
 - school grounds development.
- LINE was used across all curriculum areas, but most regularly and consistently in the core subjects of science, English and maths.
- Schools valued LINE for enabling pupils' wonder and creativity, supporting teaching and learning of particular concepts, and bringing subjects to life.
- Case-studies interviewees reported that schools valued non-curricular LINE activities.
- The proportion of schools that engaged with LINE providers did not change over the project.

Table continued...

- The most frequently reported challenges to initial LINE development in schools were
 - staff lacking confidence in working outside,
 - staff uncertainty about linking LINE to the curriculum
 - lack of funding
 - the need for volunteer support
 - time.
- The first four challenges all reduced during the project lifetime, reflecting schools' developing understanding of how low-cost LINE could support school priorities and be embedded into regular curricular and non-curricular activities.
- Time increased as a challenge for schools. Schools reported needing time to develop their confidence and practice to teach outdoors and to communicate the benefits to others. This appears to demonstrate schools understanding of the fundamental factors of embedding LINE practice.
- Challenges to LINE were school specific and changed during the course of the project. This was shown to be an ongoing process in which schools addressed immediate challenges and then, as confidence in LINE practice grew over time, identified new challenges. Results suggest that an initial audit and priority assessment to develop a school action plan for LINE, followed by regular reviews, would help to identify and address solutions to particular issues as they changed over time.

- Waite et al 2016, p.75

Appendix 4: Detailed findings from the NCDP that may be used in York

i. Ways to embed LiNE into school practice:

5 ways to embed outdoor learning into school practice

1. **Get the whole school on board** with outdoor learning
2. **Collaborate and network** with others outside of the school to develop outdoor learning
3. **Make use of school grounds and local spaces**
4. **Provide formal and informal CPD opportunities** to build confidence and practice
5. **Demonstrate and record progress**

- University of Plymouth 2016, p.4

ii. Challenges to schools:

The top five challenges most frequently selected by schools were:

- **staff lacking confidence in working outside**
- **staff uncertainty about linking LiNE to the curriculum**
- **lack of funding**
- **the need for volunteer support**
- **time.**

- Waite et al 2016, p.71

iii. Forms of Teacher confidence:

Teacher confidence. This took a number of forms:

- Reluctance to move outside the safety of the classroom and to try new approaches: *'teachers are ... lacking confidence in moving outside of the box of their classroom'*.
- Lack of confidence that LINE would have a positive impact: *'there's such pressure on them [teachers] getting a child from A to B in terms of their progression; they've got the confidence to do it in the classroom, but they don't have the confidence that they can do it outside the classroom'*.
- Lack of confidence in their ability to support others. Some teachers were described as *'passionate teachers but [they] don't see themselves as great and again aren't confident sharing'*.

- Gilchrist et al 2017, p.348

iv(1). Roles for Continued Professional Development (CPD):

CPD was central to delivery of the Natural Connections project. Its role was to support school staff in:

- developing knowledge, understanding and practice of LINE
- giving confidence in the efficacy of LINE, thereby supporting efforts to embed LINE and to shift the school teaching and learning culture to one that embraced LINE
- addressing practical challenges such as funding, grounds development and health and safety requirements.

- Waite et al 2016, p.8

iv(2). Types of CPD by teachers in the NCDP:

29.2 What types of CPD were attended by school staff?

Survey comments, hub leader interviews and case-study visits showed that schools undertook seven broad types of CPD, either at school or at other venues:

- CPD that related LINE directly to the curriculum, such as using the outdoors as inspiration for creative writing and Key Stage 2 maths.
- Forest School/Forest School-type training, focused on the foundational aspects of learning such as enjoyment and engagement with learning, confidence, improved behaviour and greater social skills (see KEQ 4).
- Place-specific CPD such as 'Teach on the Beach' or in woodlands. These sessions would often, but not always, be curriculum-related.
- Leadership training in LINE, such as the Masters' module at Plymouth University and the Cambium course on the outdoor coordinator role.
- CPD focused on specialist knowledge such as the John Muir Award, bushcraft, clay oven construction and wildlife identification.
- CPD related to practical challenges such as funding, grounds development, engaging volunteers, first aid and health and safety.
- Informal CPD of networking or conversations between school staff. One hub leader commented on the power of this type of knowledge transfer in giving teachers confidence: *'There is nothing more powerful than having another teacher say ... This is how I did it!'*.

- Gilchrist et al 2017, p.391

v. Types of LiNE Practices:

Hub leaders and schools reported a variety of new LINE practices that involved

- the regularity of LINE practice
- staff management in relation to LINE
- curriculum activities
- resource development
- grounds development
- collaborative projects
- creative projects.

- Gilchrist et al 2017, p.373

vi. Characteristics of Schools most likely to engage with LiNE:

Hub leaders found that schools most likely to engage with LiNE had:

- Senior leadership buy-in
- Confident, knowledgeable and enthusiastic LiNE leadership
- Open-minded staff
- More arguably, 'outstanding' or 'good' Ofsted grading, as schools have fewer other challenges to deal with than those in categories three and four.

- Gilchrist et al p.328

vii. Pattern of Adoption of LiNE:

Natural Connections found that schools' aspiration to increase the amount and regularity of their outdoor learning increased during the project. A pattern of adoption emerged:

- schools firstly understood the benefits to pupils and teachers, through example and practice
- then augmented the amount of time they spent teaching and learning outdoors
- then increased the regularity and spread across the school of outdoor learning activity.

- University of Plymouth 2016, p.15

viii. Characteristics of Successful LiNE implementation:

The characteristics that underpinned and reflected successful LINE implementation were:

- creation of a positive staff culture towards LINE (including confidence and wider recognition and reward)
- growth in school aspirations for LINE
- enhancing teaching practice across the curriculum
- collaboration and networking with other schools
- development of school grounds.

- Waite et al 2016, p.74

ix. Three key methods of embedding LiNE activities in schools:

Across the project, hub leaders were agreed on three key methods of embedding LINE activities within schools:

- **Starting small**, allowing teachers time to engage philosophically, emotionally and practically with LINE activities. As one hub leader commented: *'Schools have found that staff need time to see for themselves the benefit of LINE and to integrate it into their practice. This cannot be rushed. In many schools it needed at least a year to bring all on board ... Rush it and you lose it'*.
- **Ensuring the LINE lead has the 'agency and influence' to make changes within the school.** Hub leaders agreed that the role of the LINE lead, in which s/he needed to build staff enthusiasm for LINE, disseminate ideas and support LINE practice, was critical in building LINE momentum within schools. Equally, however, s/he needed to be able to build a LINE team as levels of practice increased to ensure the responsibility did not rest with one person.
- **Mapping LINE onto other initiative(s).** By integrating LINE into other initiatives – such as the Healthy Schools award or Active Mark, and curricular initiatives such as 'Heritage Schools' or 'Space to Write' – schools were able to engage in a purposeful way with LINE that reached across different aims. Another approach was to invest in technology (such as tablets) that could be used both inside and outside, offering flexibility in lesson delivery.

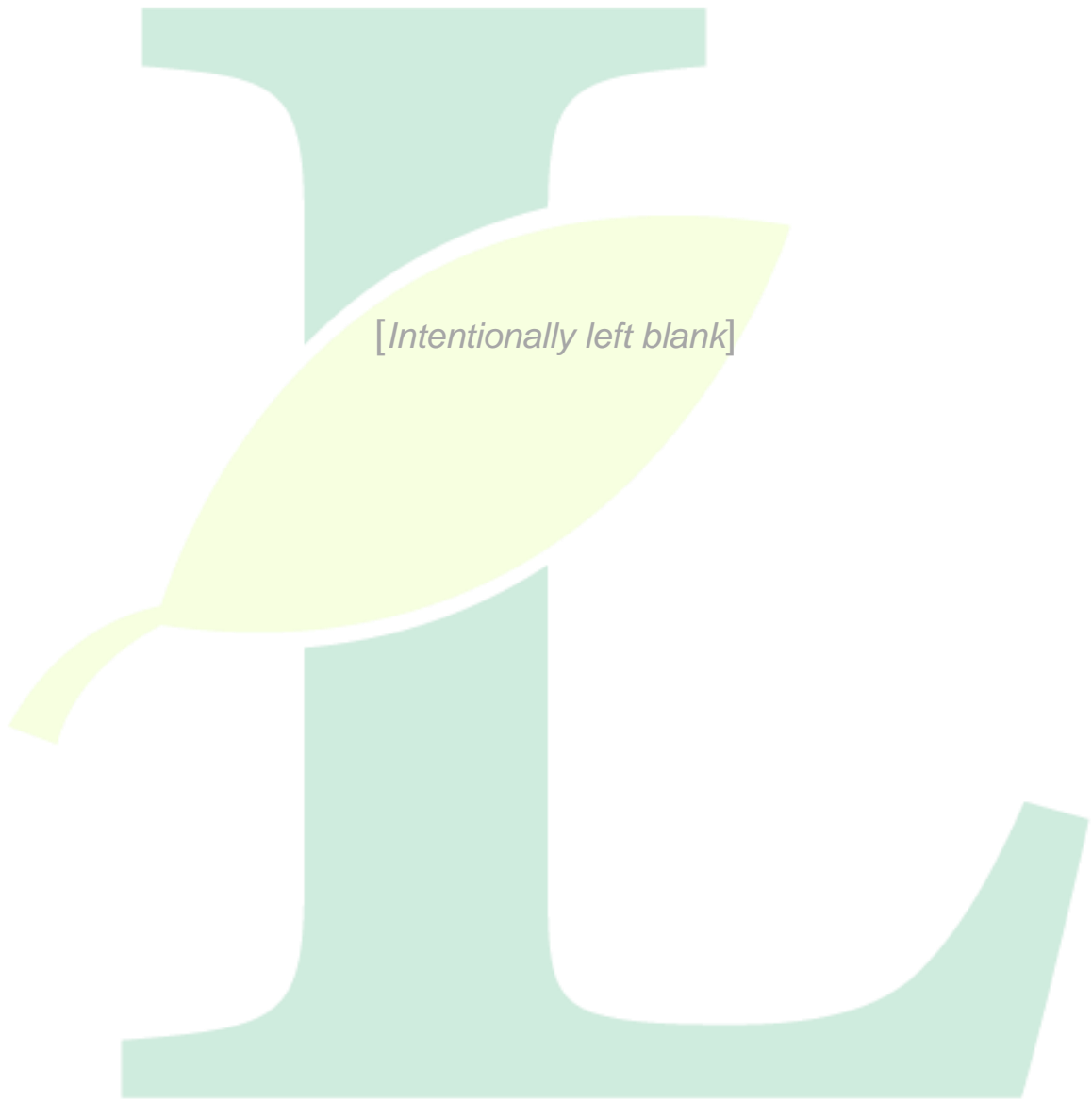
- Gilchrist et al 2017, p.244

x. How schools were supported in overcoming any barriers they faced:

Key points

- Key factors in developing LINE in schools were investments of time, goodwill, energy and funding.
- Hub leaders offered a wide range of support mechanisms to support project schools.
- Initial support for beacon schools was essential to generate confidence in LINE within the school.
- LINE action plans were important in providing a sense of direction and purpose for schools.
- CPD was central to overcoming challenges and creating a change in school culture towards understanding and using LINE.
- Money, whilst helpful and appreciated by schools, was not essential to overcome challenges.
- A large organised project with government funding and university backing gave credibility to LINE.

- Gilchrist et al 2017, p.351



[End]