Natural Connections Demonstration Project, 2012-2016: Analysis of the key evaluation questions part 3

NATURAL ENGLAND

Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties.

Background

The Natural Connections project was intended to:

- Stimulate the demand from schools and teachers for learning outside the classroom in the local natural environment.
- Support schools and teachers to build learning outside the classroom in the local natural environment into their planning and practices.
- Stimulate the supply of high quality learning outside the classroom in the natural environment services for schools and teachers.

This report is part of Annex 1 of the final project report, NECR215, that was published in 2016 and presented the key findings from the Natural Connections Demonstration Project.

These reports, and other evidence, have been used by Natural England and a wide range of partner organisations to shape the design of the demonstration project.

The project was funded by the Department for the Environment, Food and Rural Affairs (DEFRA), Natural England and Historic England, commissioned by Natural England, and delivered in South West England by Plymouth University.

KEQ 16. Were schools satisfied that the project made a good assessment of their needs?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can support schools in identifying their needs and requirements
KEQ 16. Were schools satisfied that the project made a good assessment of their needs? **16.1** How did hub leaders assess beacon school needs? **16.2** How were cluster school needs assessed?	
Data sources Hub leader interviews, July 2015 school survey	
Key Points • Beacon schools received more support and encouragement from hub leaders in assessing their needs than cluster schools. • There was little difference between hubs in the level of support offered to beacon schools • There were noticeable differences in the models of cluster school needs assessment both within and between hubs. • Special and secondary schools experienced greater difficulty in networking within hubs because they were fewer in number.	
NOTES In this KEQ we examine how beacons and cluster school needs were assessed across the five hubs. Schools were not asked directly whether the project had made a good assessment of their needs, so insight is provided from hub leader interviews and exemplified by school survey comments on satisfaction with their relationship with hub leaders and beacon schools. School satisfaction with the project is covered in detail in KEQ 18.	

16.1 How did hub leaders assess beacon school needs?

The common approach for all hub leaders was to provide an initial one-to-one consultation with each beacon school to assess their needs and then to support them in developing plans for LINE. This initial stage was quickly followed by hub leaders organising regular beacon network meetings, which provided a discussion forum for project development in each area. Each hub leader found that assessing school needs was not a straightforward linear process of assessment, planning and solution, but more an ongoing system of support as new and different issues arose. Each hub approach is outlined below.

Bristol
Hub leaders met beacon schools individually to discuss their potential contribution to the project and their requirements to carry out that role. Beacon schools then produced an

action plan to a set format that included identifying strengths, weaknesses, opportunities and threats; they followed this by setting out short-, medium- and long-term aims for LINE, together with the actions required by the school and the hub leader, and the success criteria. Support for beacons after this initial one-to-one consultation period was provided through beacon school network meetings where the beacon schools and hub leaders shaped the future of the project according to the different schools' needs and situations.

There were three Bristol beacon school responses to the survey question: 'How effective is the working relationship with your hub leader in relation to developing LINE?' in July 2015, and they all demonstrated strong satisfaction with the hub leaders' approach:
- 'Nic has been great at getting ideas off the ground. Sarah has been excellent at organising and networking - this takes time, often that teachers don't have!'
- 'The regular[arity] and the ease of contact. The regular meetings have built in space for consideration of LINE and issues around it, as well as its prompting its potential within the school'.
- 'Passionate and supportive'.

Cornwall

After their initial meeting, beacon schools continued to be supported individually through termly visits from the hub leaders to talk though through experiences, practice and future development of LINE. Ongoing support was also provided through beacon school meetings, which were used to develop project identity and share practice, although the distances in Cornwall meant these were not always fully attended. Schools were encouraged to use an action planning template, but seemed to find the termly conversations with the hub leader to be more helpful in identifying needs and actions. At the end of the project few Cornwall schools were currently using the Natural Connections LINE assessment tool as a way of structuring their LINE work and aligning it to school priorities.

There was one Cornwall beacon school response to the survey question: 'How effective is the working relationship with your hub leader in relation to developing LINE?', and it shows a high level of satisfaction with hub leaders' assessment of the school's needs:
- 'We have been visited regularly - lots of ideas and positive encouragement, and the funding has been invaluable'.

North Somerset

Beacon schools in this hub were visited by the hub leader to discuss their priorities and the ways in which these could be supported by the project. Although the North Somerset hub linked with the Bristol hub delivery network early in the project, the North Somerset beacon schools were not involved in the Bristol beacon school network meetings, and the hub leader organised separate ones for North Somerset beacon schools. The aim of these meetings was to develop shared priorities across the beacon schools in North Somerset.

There were two North Somerset beacon school responses to the survey question: 'How effective is the working relationship with your hub leader in relation to developing LINE?', one of which showed strong satisfaction with the hub leader approach, and one that was less satisfied:

- 'Our hub leader has been very knowledgeable about key aspects of developing lessons for primary'.
- 'Due to my absence I have not organised any meetings within our cluster. No one has approached me in any capacity. The local training has offered the opportunity to dev[elop] skills'.

Plymouth

The Plymouth hub leaders initially met face-to-face with individual beacon schools, and encouraged them to develop action plans. These did not have a set format across schools as was the case in the Bristol hub, but included desired outcomes and success criteria, together with the resource allocation required to achieve the desired outcomes. Different staff within the hub leader team took responsibility for particular schools, and were able to develop a strong understanding of schools' needs as they changed throughout the project; each team member provided an ongoing point of contact through the project lifetime. Plymouth hub leaders held regular beacon meetings to help shape project delivery, although these quickly developed into open meetings for all schools in the project to network and share practice.

There were two Plymouth beacon school responses to the survey question: 'How effective is the working relationship with your hub leader in relation to developing LINE?', and they show satisfaction with the levels of hub leader communication:

- 'Communication about courses and meetings is good. Helped with the creation of our environment areas'.
- 'Regular correspondence'.

Torbay

The first Torbay hub leaders had discussions with prospective beacon schools with the aim of identifying the *'veins of practice and the veins of interest which exist within Torbay'* and finding ways to *'follow those veins and extend them and make them more effective'*. Ongoing support to meet school needs was provided by the project LifeLINE meetings, which were the mechanism for beacons to identify any shared priorities and agree on areas for future CPD. Some schools produced structured LINE action plans, although this was driven by schools rather than the hub leader. The second Torbay hub leader felt that she did not inherit a structured system or an understanding of school needs, and invested time in bringing beacon schools together to consider the long-term sustainability of LINE and the Natural Connections project in Torbay.

There were no Torbay beacon school responses to the survey question: 'How effective is the working relationship with your hub leader in relation to developing LINE?'.

16.2 How were cluster school needs assessed?

Cluster schools were not supported during the project in the same way across different hubs, and we show the different models of support below. Where cluster schools were supported directly by beacon schools, the nature of this support varied, depending on how both beacon and cluster schools viewed and interpreted the relationship:

- Bristol – all schools were part of one collaborative network
- Cornwall – most support for cluster schools was provided directly by beacons, but some schools were supported by the hub leader individually later in the project if they approached them direct.
- North Somerset – became part of the Bristol collaborative network, but developed some direct support between beacon and cluster schools. Schools also received some direct support from the hub leader if they approached them directly.
- Plymouth – encouraged more direct relationships between beacon and cluster schools, but developed a collaborative network for all schools by the end of the project
- Torbay – originally had one collaborative network; this shifted to direct relationships between beacon and cluster schools, but returned to one network by the end of the project. Schools also received some direct support from the hub leader if they approached them directly.

Bristol
Bristol hub leaders reacted quickly to developments within their hub and tried a number of ways of assessing and responding to schools' needs. After their initial beacon school recruitment, they responded to schools' requests for project clarity and developed four LINE foci: Grow it, Capture it, Explore it, Change it. These foci, however, failed to gain traction and the hub leaders subsequently experimented with a number of ways to engage and support schools that included a LinkedIn network, a blog, developing a Wild Time for Schools web-based app in partnership with Project Wild Thing[10] and based on their own Wildtime app, and a #thisisaclassroom website. At the same time they offered all schools regular LINE meetings, a CPD programme for any interested school, separate LINE provider meetings (although these were later incorporated into the regular LINE meetings), and an annual conference. Cluster schools were not offered individual assessment and support, but were able to access these different mechanisms as they chose. Support for all schools in the hub continues with the Wild Time for Schools app, which is currently cost-free although there are plans to charge for it when fully developed, #thisisaclassroom website, regular network meetings that include CPD, and an annual conference.

Because the hub model was one large network, cluster schools that commented in the July 2015 school survey were unsure of who their beacon school was and what they might offer.

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[10] See http://www.thewildnetwork.com/ for further information.

We show instead the seven responses to the question 'How effective is the Natural Connections project in helping you to overcome your challenges to LINE?'; five showed a high degree of satisfaction with the support they had received:

- 'Regular emails. It helps with making links between providers who can help us'.
- 'Useful to connect with others, share ideas and practice, audit, signpost etc'.
- 'It is a way of hearing how others have overcome problems or finding others in a similar situation where by you can support each other in finding a solution'.
- 'It is a very supportive collaboration which I feel we have not yet become involved enough in yet'.
- 'Networking opportunities, access to CPD, inspiration'.

Two responses showed less satisfaction. One school had just started LINE and the other had highly specific needs that were not addressed by the project:

- 'I'm unaware of the Natural Connections project. The outdoor work has just been started'.
- 'Our challenges are very particular due to the severe learning difficulties of our pupils, including physical difficulties/challenging behaviour - these are not particularly addressed by Natural Connections (no criticism implied - we are highly specialized). We are either able to overcome them ourselves without the need for Natural Connections or a longer term strategy is needed'.

Cornwall

This was a far less centralised system than in Bristol; beacon schools were helped by the hub leaders to recruit their cluster schools but subsequently managed their own local relationships, with cluster schools receiving direct support from their 'own' beacon school. The rationale for this model was that, in a large geographical area such as Cornwall, devolved relationships would be easier to manage and more sustainable than one large network and mean that schools in similar situations (e.g small coastal schools) would be able to better identify and address shared priorities.

Cluster school responses to the survey question 'How effective is the working relationship with your beacon school in relation to support and delivery of LINE activities?' show that this model can be highly effective; two responses from schools that shared the same beacon school were:

- 'A driving force'
- 'It is good to share experiences and ideas linked to LINE and support each other'.

A third response also showed satisfaction with the support offered:

- 'The organising of meetings has been helpful'.

The final response from Cornwall schools to this question showed uncertainty around the model:

- 'I do not know who my Beacon school is'.

North Somerset

The North Somerset hub leader attempted to bring all hub schools together. Hub leaders organised two or three meetings for beacon and cluster schools which were fairly well attended, although each time by different schools. Hub leaders found that schools were not prepared to travel far within Northern Somerset and these meetings were discontinued due to insufficient demand; all project schools from that point were invited to join the Bristol LINE network. In a localised response that took into account the wide geographical area of the hub, however, the hub leader focused on setting up three mini-hubs that were based on a collaborative – rather than beacon/cluster – model; one was highly successful and work was still ongoing in the other two at the end of the project with the aim of setting up a sustainable group in each area. In addition, the hub leader worked with a few individual cluster schools in a similar way to beacon schools, although this was in response to cluster school requests and enthusiasm rather than through a systematic approach.

Taking account of this mixed approach, we have included comments from both survey questions in this KEQ. There were three North Somerset responses to the July 2015 school survey question 'How effective is the Natural Connections project in helping you to overcome your challenges to LINE?', all of which showed satisfaction with the level of project support:

- 'I really appreciate having the support - I would feel much more isolated without Natural Connections there, ready to help in whatever way they can'.
- 'Provided opportunities for CPD and sharing best practice for outdoor learning'.
- 'Meetings have been cancelled but support is always available on the phone'.

There were two responses to the question 'How effective is the working relationship with your beacon school in relation to support and delivery of LINE activities?', with one showing satisfaction:

- 'CPD: visiting different school settings where LINE is delivered'.

The other showed a secondary school's frustration in the lack of communication and sector support:

- 'There isn't any communication between us. Doesn't help that they are all primary schools'.

Plymouth

The Plymouth hub leader approach developed into a mixed economy, with some beacon schools directly supporting 'their' cluster schools. Hub leaders reported that some beacon schools were highly proactive, but that others were not. All schools were offered regular CPD meetings and had the opportunity to contact with the hub leader team; those schools that felt unsupported by their beacon school were able to access this wider support.

Once again we have included school responses to both July 2015 questions. There were seven Plymouth school responses to the July 2015 school survey question 'How effective is

the Natural Connections project in helping you to overcome your challenges to LINE?', and four showed satisfaction with the degree of support available:
- 'Gives confidence - hub meetings to meet and share ideas'.
- 'My main support has been with my beacon school offering contact names. I was able to get raised beds built & stepping stones put down as a result, but we paid for the work. My beacon school was able to offer a lower price for the stepping stones through bulk buying. Another 'contact' built a fence around our garden, & again, we paid for the work. Everything else we have done ourselves'.
- 'Given a focus on LINE for us, enabled us to work across the city in inter school collaborations'.
- 'CPD and networking'.

Two, however, reflected hub leaders' comments (see KEQ 5) that not all participating schools were LINE-active:
- 'I have not been to many hubs meetings this year due to time constraints, but found them useful in the past'.
- 'LINE has not been a priority this academic year, neither do we have a designated LINE coordinator. It is not part of the SIP, neither is money budgeted for LINE. We have had sporadic involvement with Chris (which is ALWAYS top-notch), but behind that - we have not used the Woods/ general outdoors as regularly as in the academic year of 12/13 or 13/14'.

The final comment reflected the project finding of the difficulty of instigating culture change in schools (see KEQ 23):
- 'Having an in-house outdoor educator seems to make the other staff think it is not their responsibility'.

There were seven Plymouth cluster school responses to the question 'How effective is the working relationship with your beacon school in relation to support and delivery of LINE activities?' and they provided an illustration of the hub leaders' views that some beacon schools were proactive and others were not. Two showed satisfaction with the beacon/cluster arrangement:
- 'Support is there if I ask'.
- 'Great communication and flexibility'.

Two reflected the centralised support, although one response was waiting for action from the hub leader:
- 'I receive emails from [hub leaders], but do not receive from the Beacon … which I believe is [school name]. This may be down to as innocent a reason as not having my email, or as damning as the fact we have had next to zero engagement with them this academic year. The first and last time I attended a LINE meeting was at [school] I think in 2013 (?) where there was an introduction by Plymouth Uni and a fair of LINE opportunities in the canteen area of the school'.

- 'Our beacon school [name] ceased to be a beacon school. I asked for support or a cluster I can attach myself to and was told it would be arranged. I am still waiting to be linked'.

The remaining three showed little contact with their beacon school:
- 'No contact'
- 'Very rarely meet up'.
- 'Don't know who beacon school is'.

Torbay

All participating and potentially interested schools were initially part of the LifeLINE CPD network, organised by the first Torbay hub leader RIO. This had a small regular membership of schools committed to LINE (although not necessarily to the Natural Connections project), which spent time investigating and practising LINE in specialised detail (for instance in the different ways of linking clay oven use to the curriculum); needs were not assessed directly but as part of the shared priorities of the LifeLINE meetings. Schools that had wider or less specialised interests were effectively excluded from this approach and, in response to project demands for higher recruitment, the hub leader then started to incentivise beacon schools to recruit and support cluster schools – although with limited success. The second hub leader widened access to the project, and assessed needs through collective agreement on school priorities at network meetings.

Given these changes and relatively new developments at the time of the July 2015 school survey, it is perhaps understandable that no Torbay cluster schools responded to the question 'How effective is the Natural Connections project in helping you to overcome your challenges to LINE?'. There were three responses to the question 'How effective is the working relationship with your beacon school in relation to support and delivery of LINE activities?', which reflected mixed views:
- 'Our beacon school sends regular emails keeping us informed of courses etc and suggesting resources/ideas'.
- 'I haven't spoken to them since I was put in their group'.
- 'Offered a course but unable to be released to attend'.

KEQ 17. Did any themes or patterns of school demand or need emerge?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can support schools in identifying their needs and requirements
KEQ 17. **Did any themes or patterns of school demand or need emerge?**	
Data sources	
School baseline survey, July 2015 school survey	
Key points	
- Nearly all schools that responded to the survey identified pupil benefit as an aspiration for LINE, and the percentage that responded in this way remained stable between the baseline (96 per cent) and the July 2015 (95 per cent) school surveys. An aspiration for LINE to benefit staff also remained stable at 44 per cent in both surveys. - Schools' aim to increase LINE activity and to undertake more regular LINE activity increased substantially during the project's lifetime. - The aspirations to improve school green spaces for LINE, increase community activity and secure funding were all reported at a relatively low level in both surveys, suggesting these were not high priorities in LINE development. - It was possible to see a pattern in schools' survey comments in which they first, understood the benefits to pupils and teachers *'on a philosophical level'*; second, increased levels of activity; and third, increased the regularity of LINE to embed its practice across the school.	
NOTES	
This KEQ is an examination of schools' aspirations for LINE, drawn from respondents' comments in the baseline and July 2015 school surveys. Survey comments are reported 'in inverted commas'.	

Did any themes or patterns of school demand or need emerge?

- **Aspirations**

Schools were asked in the school baseline and July 2015 school surveys *'Do you have any specific aspirations that you hope to achieve from increased LINE? If so, please explain'*. Ninety-nine schools described one or more aspirations for LINE in the baseline survey; 83 described their aspirations in the July 2015 school survey. Responses were coded into seven categories:

  - Benefits for pupils (e.g. 'Improved self-esteem and confidence, communication and social skills').
  - Benefits for staff (e.g. 'Raised staff confidence').
  - Improving school grounds for LINE (e.g. 'Development of a peace/memorial garden. To construct a wooden lodge to be used as an outdoor learning hub').

- o Increase in LINE activity (e.g. 'Everyone outdoors more, for a range of curriculum areas').
- o More regular LINE activity (e.g. 'We can get all children outside every week throughout the year').
- o Community activity (e.g. 'To become a beacon school for engagement of families').
- o To secure funding (e.g. 'Tap into funding').

For the baseline survey, the numbers of aspirations in each category was divided by 99 (the number of schools stating an aspiration) and multiplied by 100 to produce a percentage score. Similarly, in the July 2015 school survey the number of aspirations in each category was divided by 83 (the number of schools stating an aspiration) and multiplied by 100 to produce the percentage score. Each percentage expressed in the figures below therefore represents a school that identified an aspiration in that survey; many schools stated more than one aspiration so the totals will add up to more than 100 per cent. Data from schools that completed the survey but did not specify an aspiration is not included in this KEQ.

- • **Change across the project**

Figure 17.1 below shows the change in school aspirations across the project. Nearly all schools that responded identified pupil benefit as an aspiration for LINE, and the percentage remained stable between the baseline (96 per cent) and the July 2015 (95 per cent) surveys. An aspiration for LINE to benefit staff also remained stable at 44 per cent in both surveys, although at a lower level than for pupils. The notable change was in the categories of 'increase in activity' (from 29 to 71 per cent) and 'regular activity' (from 16 to 59 per cent), both of which increased substantially during project's lifetime. The aspirations to improve school spaces for LINE (increased from 20 to 25 per cent), increase community activity (decreased from 13 to eight per cent) and secure funding (stable at two per cent) were all reported at a relatively low level.
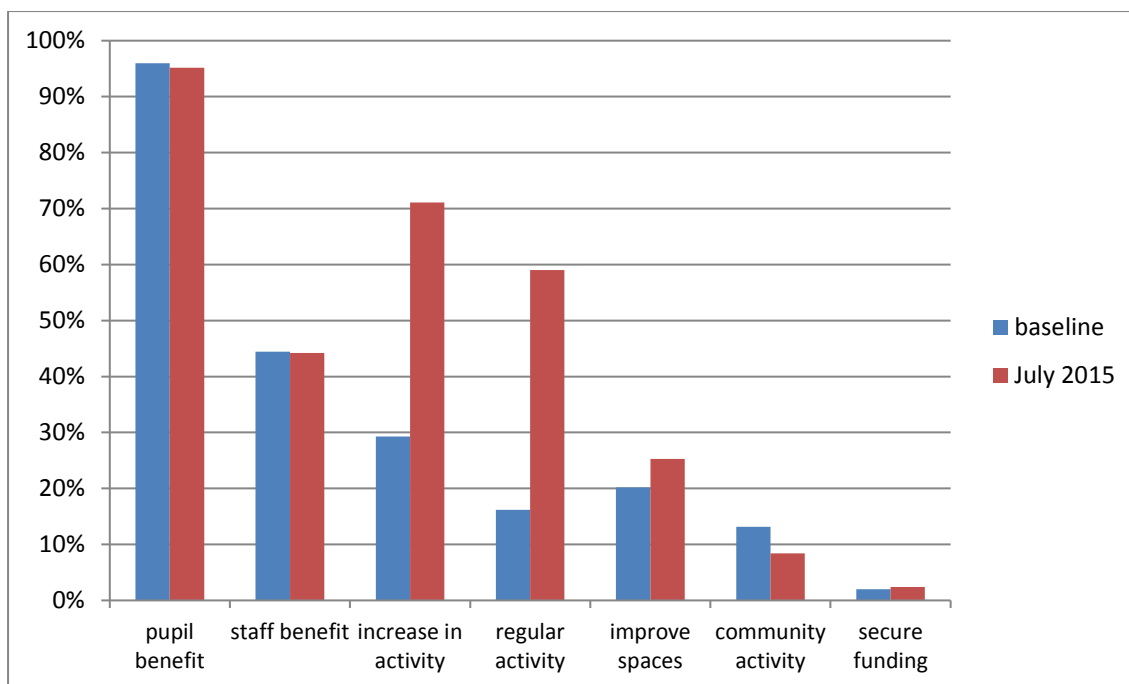
Figure 17.1: Project level school aspirations for LINE (baseline and July 2015 school survey)

- **Beacon and cluster schools compared**

Figure 17.2 below shows the same data divided into responses from beacon and cluster schools. The beacon schools' focus on pupil and staff benefits fell slightly over the course of the project – suggesting that these benefits were increasingly taken for granted by the July 2015 school survey – and their aspirations shifted towards increasing the amount of LINE activity (from 36 to 67 per cent, or 31 percentage points) and the regularity of LINE activity (from 24 to 70 per cent, or 46 percentage points). There was a small increase in the percentage of responding schools that wanted to improve their grounds (from 30 to 33 per cent), a small decrease in the percentage of responding schools that wanted to increase the amount of community activity (from 18 to 11 per cent), and a small increase in the percentage of responding schools that wanted to secure funding for LINE (from zero to four per cent). The latter change could possibly be partly explained by the end of the limited amount of project funding received by beacon schools, as this was often used to improve school grounds; it could also suggest that these schools were finding that grounds maintenance took more time and/or resources than previously expected, or that schools were finding more areas to develop as their LINE practice was expanding.
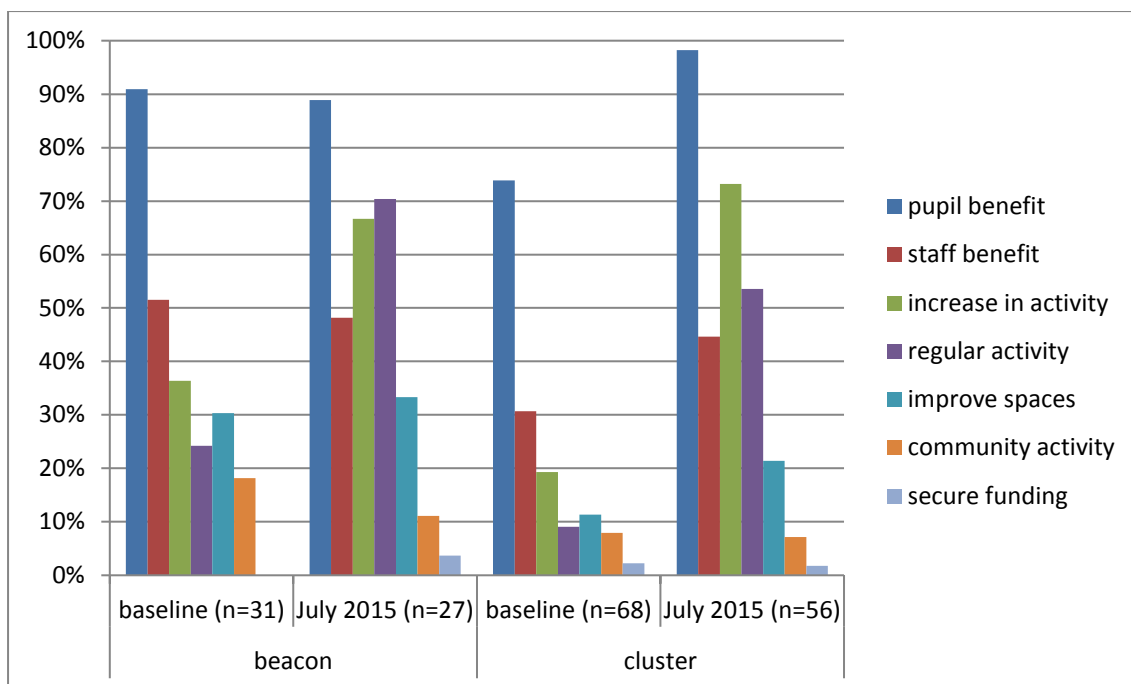
Figure 17.2: Beacon and cluster school aspirations for LINE (baseline survey)

The survey comments, however, show a qualitative shift in the type of aspirations expressed by the beacon schools between the baseline and the July 2015 school surveys. Typical examples from the baseline survey were:

- o 'Better collaborative skills'.
- o 'Increased use of the schools grounds. Raised staff confidence. Maximise links with local schools. Engaged and enthusiastic learners'.
- o 'To create a culture around the school where outdoor learning is part of and seen as important as part of the students' learning journey from the time they start with us to when they leave in Y13'.

These aspirations were relatively unformed and very few stated focused, measurable aims such as:

- o 'More 'pods' in the outdoor areas so that learning tools are accessible readily'.
- o 'Train staff member as horticultural therapist'.

These relatively unformed ideas contrasted with responses to the July 2015 school survey, in which almost all beacon schools' stated aspirations in the July 2015 school survey were specific, with clear aims for how the schools would improve and/or expand LINE. For example:

- o 'For classes to be outdoors a minimum of once a week'.
- o 'Develop outdoor learning space [nearby] so that it runs every Friday through the academic year – this year we started in February. Encourage more curriculum areas to use it for their subject – this year it has been used by geography, history and PE'.

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- o 'To increase the number of regular volunteers to our weekly Wild for Learning sessions'.

There was also a sense of continuity and building on established practice:
- o 'To keep the project rolling and keep the focus on delivering quality experience outdoors through the new curriculum'.
- o 'To continue to develop the outdoor learning areas'.
- o 'Further increase the curriculum areas taught outside, by making resources easily available'.
- o 'To ensure new teachers joining our school understand our vision of LINE. To maintain outdoor learning special experiences e.g. trips, forest schools etc. To continue to provide teachers with ideas for outdoor learning in curriculum lessons'.

The contrast in the comments, when seen in terms of the increased confidence in the July 2015 school survey in both LINE and these schools' capacity to deliver it, suggested the development of a group of beacon schools that were highly engaged with LINE and that were focusing on embedding it widely and sustainably within their everyday practices. Some, but not all, were supporting cluster schools during the project lifetime.

Cluster schools' responses suggested a similar pattern but one that was lagging behind the beacon schools' in terms of LINE development; cluster schools were intended to be ones that had yet to fully engage with LINE, although this was not always the case. Cluster schools expressing aspirations to benefit pupils rose from 74 to 98 per cent between the two surveys and aspirations to benefit staff rose from 31 to 45 per cent, suggesting that these schools were developing a greater understanding of how LINE could benefit both adults and children. The largest rise was in cluster schools' aspiration to increase the amount of LINE activity (from 19 to 73 per cent, or 54 percentage points), while the aspiration to increase the regularity of LINE rose from 9 to 54 per cent (45 percentage points), equating to nearly a four and six fold increase respectively. These figures suggest that some cluster schools were still developing the types and amount of LINE activity, while others were consolidating their activity by increasing its regularity; other may have been doing both at the same time. When these statistics are linked with the survey comments, it is possible to see a similar pattern to that of the beacon schools; of some cluster schools' stated aspirations shifting from wide-ranging ambitions in the baseline survey, for example:
- o 'Confident and motivated children who are resilient and aim for a brighter future'
- o 'Healthy lifestyles for all children'

towards more focused and manageable goals in the July 2015 school survey, such as:
- o 'For all year groups to be taking a lesson in our outdoor classroom at least once every half term'.

- o 'Each curriculum area increases its LINE delivery by 4 lessons per term (i.e. 24 outdoor lessons)'.
- o 'Developing skills from Early Years and KS1 which can be transferred into KS2. One example might be preparing and lighting fires over a set number of sessions (awe and wonder using the outdoors) that KS2 can simply use to build a fire and explore condensation/evaporation so the focus is scientific enquiry'.
- o 'To finish our outdoor classroom build, to develop a nature detectives area and forest skills area'.
- o 'Complete the sensory/spiritual garden. Develop our forest school area for Foundation stage'.

Cluster schools' variable length of engagement with the project and with LINE, however, can be seen in a number of responses to the July 2015 school survey that show less direct purpose than the ones shown above. For example:
- o 'To promote more outdoor learning'.
- o 'Now we have developed the outdoor grounds, it is a case of using them in day to day lessons'.
- o 'Increase amount of time spent outside'.

In summary, the data suggest a group of confident beacon schools who were working on specific ways in which to embed LINE further in their everyday practice. Cluster school responses, however, suggest that these schools were developing their LINE practice at varying speeds, with some more established in their approach than others. When all the comments are taken with the results from Figure 17.2 above, it is possible to see a pattern in which schools first, understood the benefits to pupils and teachers *'on a philosophical level'* (see KEQ 5, section 5.2); secondly, increased levels of activity; and third, aimed to increase the regularity of LINE to embed its practice across the school. Aspirations to improve school grounds or to raise funding increased relatively little, as did increasing community involvement, suggesting that these were lower priorities for schools, and that they focused instead on refining the ways in which LINE could support their core business of attainment.

- **Aspirations within hubs**

Figures 17.3 and 17.4 below show schools' LINE aspirations by hub, in which all generally followed the patterns outlined above. There were a few notable differences, however, between the hubs. A higher percentage of responding schools from **Bristol** stated aspirations to benefit staff (project baseline 44 per cent, Bristol 59; project July 2015 school survey 44 per cent, Bristol 65), which may be related to the hub leaders' approach of integrating the Natural Connections project with their core business aim of providing teacher CPD, with the result that schools were aware of its availability. Bristol schools also reported higher aspirations to increase the regularity of LINE activity (project baseline 16 per cent, Bristol 47; project July 2015 school survey 59 per cent, Bristol 76), suggesting that project schools generally were highly engaged with LINE (see KEQ 5).
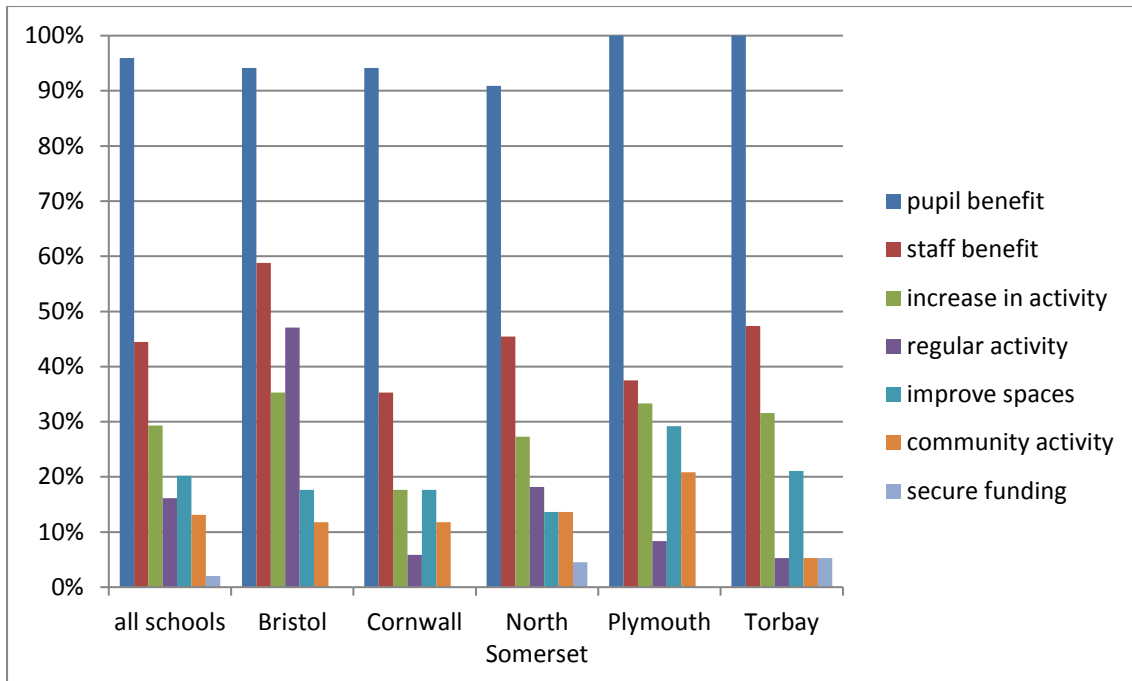
n=99: Bristol n= 17, Cornwall n=17, North Somerset n=22, Plymouth n=24, Torbay n=19
Figure 17.3: Project and hub level school aspirations for LINE (baseline survey)
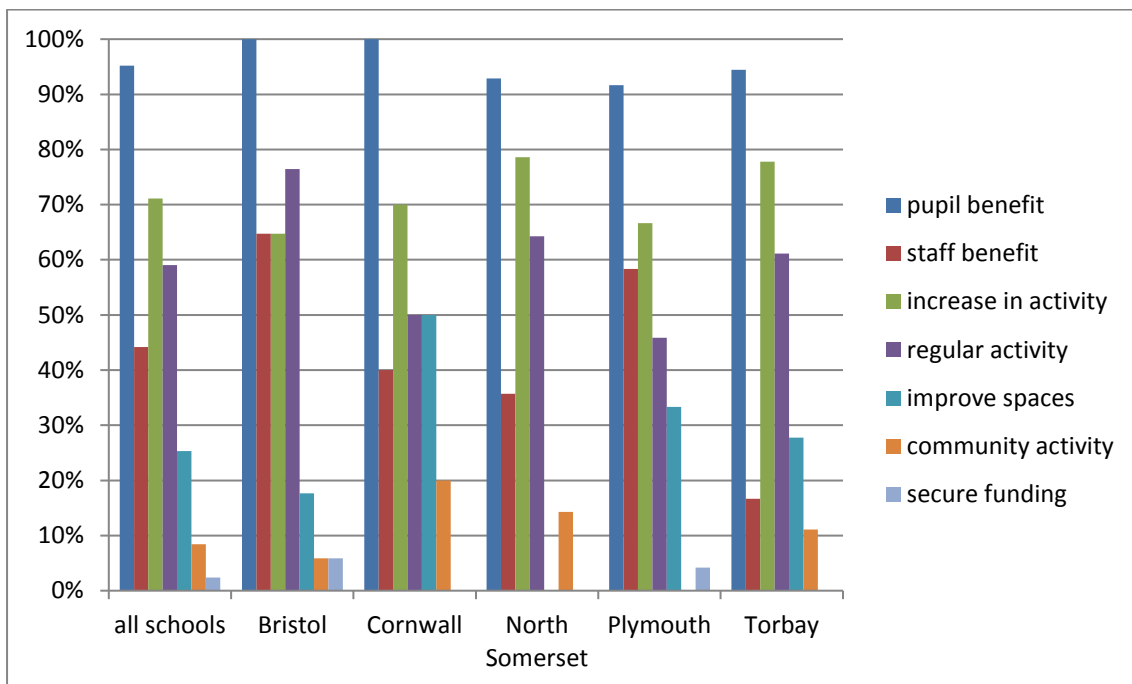
n=83 Bristol n= 17, Cornwall n=10, North Somerset n=14, Plymouth n=24, Torbay n=18
Figure 17.4: Project and hub level school aspirations for LINE (July 2015 school survey)

Schools from **Cornwall** reported aspirations that were close to the overall project pattern, and the single difference was the relatively high percentage of schools reporting in the July 2015 school survey that they aimed to improve the school grounds (project 25 per cent, Cornwall 50). This was in contrast to no responding schools in **North Somerset** aiming to improve their school grounds in the July 2015 school survey, the only notable difference in this hub from general project results in both surveys. **Plymouth** schools also reported

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aspirations similar to the project-wide results. **Torbay** schools' notable differences were first, in the percentage of schools reporting that they wanted to increase the regularity of their LINE activity in the baseline survey (project baseline 16 per cent, Torbay 5 per cent) which increased to 61 per cent in the July 2015 school survey (project increase 46 percentage points, Torbay 56 percentage points).

There were no notable patterns between hubs in the survey comments.

KEQ 18. What were the satisfaction rates within the project of: Beacon schools? Cluster schools?

Project element and objective	Assumption
Brokerage: Support schools in identifying their needs and requirements	The brokerage element can match schools' ongoing needs with supply, leading to increased LINE activity
KEQ 18. What were the satisfaction rates within the project of:	
• Beacon schools? • Cluster schools?	
Data sources	
July 2015 school survey	
Key Points	
• There was a clear difference between beacon and cluster satisfaction with all areas of the project. Beacon schools' higher satisfaction was likely to be because of the higher level of support they received from hub leaders, their clearer understanding of the project and their longer-term, and therefore more established, relationship with the hub leader. • Schools that were more at the periphery of the project (i.e. cluster schools) tended to have lower levels of satisfaction with the project. Survey comments suggest this was because of poor communication between schools, schools' competing priorities and/or difficulty with embedding LINE in cluster schools. A few schools had recently joined the project and were unsure of its effect when they completed the survey. • The relatively high proportion of cluster schools that viewed their relationship with the beacon schools as 'neither effective nor ineffective' may partly be due to most hub leaders moving towards a hub-wide collaborative network by the time of the July 2015 school survey. • Beacon and cluster school valued highly the opportunity to network and to discuss aspects of and challenges to LINE with other, often more experienced practitioners.	
NOTES	
The number of respondents to some questions was low and therefore caution is required in interpreting or generalising these findings. Survey comments are shown 'in inverted commas'. Not all schools provided comments after rating the different aspects of the project.	

The findings below should be viewed within the context of the overall hub models (see KEQs 3, 15, 20 and 28 for detailed analysis of hub leader models) in which the hub leaders provided similar services for schools although the nature of the beacon school – cluster school relationship varied:

- Bristol – all schools were part of one collaborative network
- Cornwall – most support for cluster schools was provided directly by beacons

- North Somerset – became part of the Bristol collaborative network, but developed some direct support between beacon and cluster schools
- Plymouth – encouraged more direct relationships between beacon and cluster schools, but developed a collaborative network for all schools by the end of the project
- Torbay – originally had one collaborative network; this shifted to direct relationships between beacon and cluster schools, but returned to one network by the end of the project.

What were school satisfaction rates with the project?

Below we show school satisfaction rates with the project in overcoming challenges to LINE. The results are shown first by beacon school and then by cluster; all results are shown as numbers as there were six or fewer returns from beacon school in each hub (27 responding schools in total), and between six and nineteen responses from cluster schools in each hub (58 responding schools in total).

- **Beacon schools**

Figure 18.1 below shows that beacon schools' overall satisfaction with the project was high, with 21 out of 27 stating that the project had been either 'effective' or 'very effective' in helping them overcome challenges to LINE.
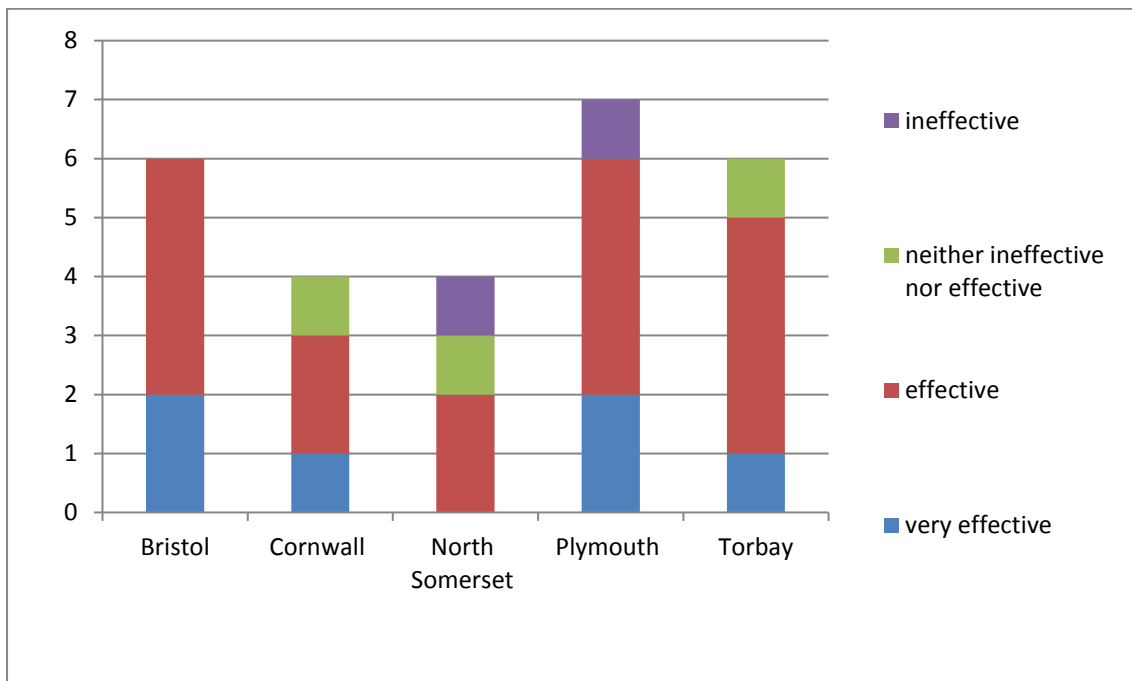
n=27: Bristol n=6, Cornwall n=4, North Somerset n=4, Plymouth n=7, Torbay n=6
Figure 18.1: Hub-wide beacon schools' views on the effectiveness of Natural Connections in helping overcome their challenges to LINE

Survey comments showed that, across the project, schools valued the project in the following areas:

- o **Raising the profile of LINE**: The project has *'given LINE a status and drive at our school'*.
- o **Networking**: the school has been *'provided with lots of links to other schools and to providers'*.
- o **Curricular links**: *'There is another meeting in the autumn to link LINE to science which should support us greatly'*.
- o **Giving confidence**: *'It has enabled me to connect with other like-minded teachers who have a vision of what education should be like, but also have the very real pressures of the rest of life in a busy school which hinder what can be done about it. It therefore makes it easier to implement the changes required'*.

Within the hubs, Bristol had the highest levels of beacon school satisfaction with the project, with all six responding schools viewing the project as 'very effective' or 'effective' in helping them to overcome their challenges to LINE. Cornwall, North Somerset and Torbay each had one school that rated their project satisfaction as 'neither effective nor ineffective', while North Somerset and Plymouth had one school each that believed the project was 'ineffective' illustrated in the comment below on the importance of finding time and funding for teacher CPD:

- o *'We have been to the hub meetings which are good for networking. Our main issues are funding and time. The initial grant was good but our real progress has been made through employing a consultant to bid for more money. The next challenge will be to integrate LINE into our lessons more and our real need is for adults to support staff so that they are more confident about taking groups outside - not sure how the Natural Connections project can help here?'*

This suggests that the school either could not find the time to send teachers to hub CPD sessions, or that the school had not received sufficient information about the sessions. The other school that reported dissatisfaction with the level of hub leader support commented that 'the only contact seems to be this survey'..

Additional comments concerned the difficulties of project implementation and the importance of staff buy-in to LINE. One secondary school commented that the project was easier to implement in primary schools, highlighting the difficulties of coordinating LINE activity within a large teaching team:

- o *'I have found that the project is naturally geared more towards primary schools; it is easier to work with a smaller staff team in such setting and get them to work using LINE than within the pressures of a secondary school'*.

Two other schools recognised that the project by itself was not enough to change school culture:

- o 'The most effective thing would be the support of the leadership team and staff to implement LINE in school. Natural Connections helps support the value and provide more purpose but [that] doesn't make it happen'.
- o 'Our Outdoor Classroom was successful prior to our school's involvement. Due to the dedication of staff and willingness to make it succeed, despite the challenges faced'.

Figure 18.2 below shows beacon schools' views on the effectiveness of their working relationship with the hub leader for developing LINE. Across the project, 17 out of 26 schools reported that their relationship with the hub leaders was either 'very effective' or 'effective', nine believed that it was 'neither effective nor ineffective' and none felt that it was 'ineffective'. Valued aspects of the relationship that were reported in the survey included:

- o The **regularity of communication**: 'The regular and the ease of contact. The regular meetings have built in space for consideration of LINE and issues around it, as well as its prompting its potential within the school'.
- o Hub leaders' **knowledge of and enthusiasm** for LINE: 'Our hub leader has been very knowledgeable about key aspects of developing lessons for primary'.
- o The **time to make LINE happen**: 'Sarah has been excellent at organising and networking - this takes time, often that teachers don't have!'
- o **Funding and practical support** in developing LINE: 'We have been visited regularly - lots of ideas and positive encouragement, and the funding has been invaluable'.

Within the hubs, Bristol once again had high levels of satisfaction from its six responding schools. Three schools each from Plymouth and Cornwall felt that their relationship with hub leaders was 'neither effective nor ineffective', as did two schools from North Somerset and one from Torbay. The one negative comment, from a North Somerset school, highlighted teacher absence as a mitigating factor in the lack of communication within the cluster (thereby reinforcing the necessity of shared responsibility for LINE within schools), but nonetheless was positive about the local CPD:

- o 'Due to my absence I have not organised any meetings within our cluster. No one has approached me in any capacity. The local training has offered the opportunity to develop skills.'

Figure 18.3 below focuses on the effectiveness of the beacon/cluster school relationship in developing LINE.
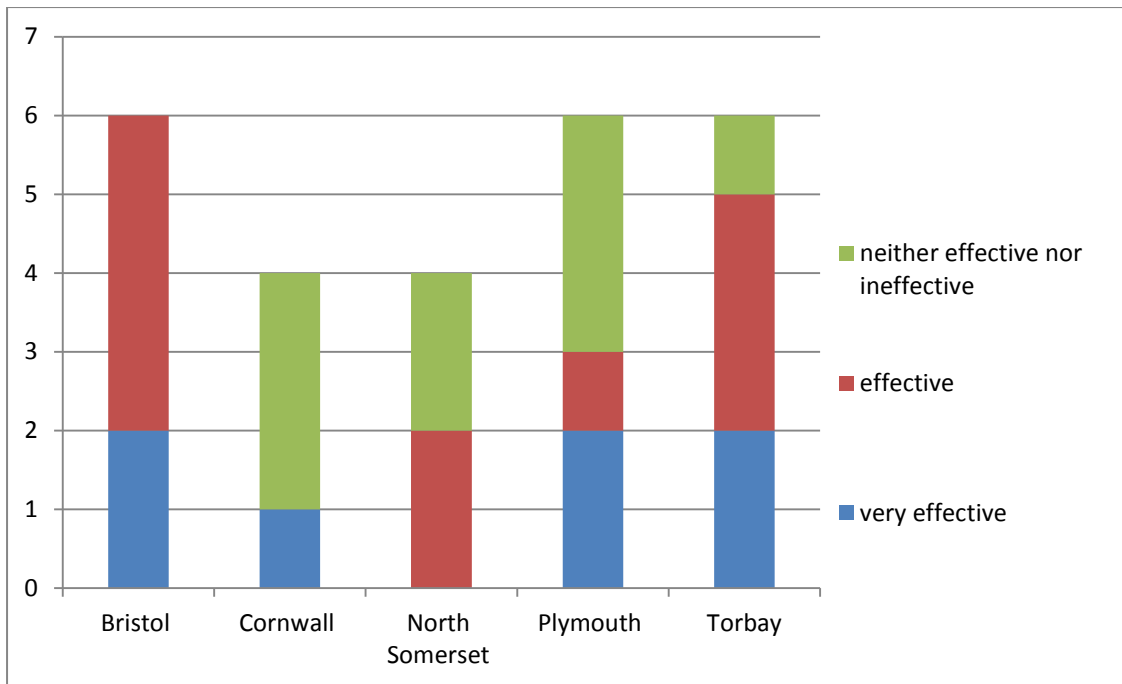
n=26: Bristol n=6, Cornwall n=4, North Somerset n=4, Plymouth n=6, Torbay n=6

Figure 18.2: Hub-wide beacon schools' views on the effectiveness of their working relationship with the hub leader in developing LINE
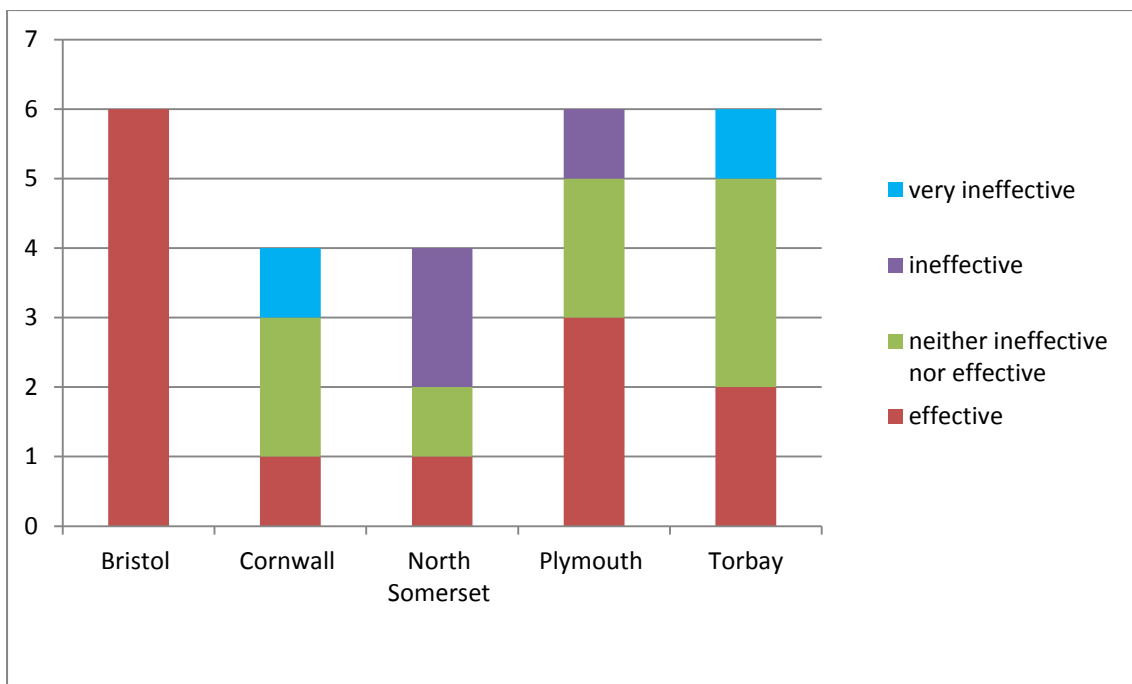
n=26: Bristol n=6, Cornwall n=4, North Somerset n=4, Plymouth n=6, Torbay n=6

Figure 18.3: Hub-wide beacon schools' views on the effectiveness of their working relationship with project cluster schools in developing LINE

Thirteen of the 26 responding beacon schools felt that their relationship with cluster schools was 'effective', with eight believing it was 'neither effective nor ineffective', and five reporting that the relationship was either 'ineffective' or 'very ineffective'. Bristol had the highest number of beacon schools reporting that their relationship with cluster schools was effective,

and Cornwall and North Somerset the lowest, but these are only based on six and four responses so no firm conclusions can be drawn.

Across the project, comments from schools that rated their relationship 'effective' or 'very effective' centred around the **collaborative nature of the project** and sharing of ideas and contacts; one school reported that 'We communicate regularly and have designed our own project linking the three schools along the number 21 bus route' and another that there were 'lots of collaboration opportunities - sharing good practice'. One secondary school felt a problem in maintaining relationships with primary cluster schools was the 'changing of the subject leaders in primaries', but that good relationships were possible: 'Once I have direct e-mail contact we have provided LINE experience sessions for four different primaries, some on two separate occasions and for all classes in a year group'.

Of the schools rating this relationship as 'neither effective nor ineffective', three reported that it was 'hard' to comment as the relationship had only just begun. Other respondents described a number of challenges to the relationship:

- o **Time and money**: 'I have contacted my cluster schools and have emailed them some documents I prepared for my staff at school but it has been difficult to form good working relationships due to time and financial restrictions (supply costs needed to be released to meet/make visits)'.
- o **Variable interest** from cluster schools: 'One school worked well with us - other schools didn't access the services available to them'.
- o **Lack of communication**: 'Cluster schools have not been in touch to ask for much assistance. We have had some outreach days at [our school], which some of our cluster schools have attended'.
- o **Lack of opportunity**: 'To be honest we have not had the opportunity to work together this year. I know that my cluster sent staff to the training here but other than that we have not worked together'.

Comments from beacon schools who felt the working relationship was 'ineffective' focused on three areas:

- o **Interest from cluster schools**: 'We have struggled to get cluster schools involved or interested in LINE in our area'.
- o 'The [lack of] **communication** between schools'.
- o **Time and money**: 'Time has not been allocated from school in order to facilitate meetings or workshops - on each side! i.e. the provider and the interested party. 'Marking time' has taken over from meeting time, it seems! With parties unwilling to meet after school as it impacts on admin time. No 'non-contact time' allowable to facilitate the meetings during school hours'.

- **Cluster schools**

Figure 18.4 below shows cluster schools' views on the effectiveness of the project in helping them to overcome their challenges to LINE.

The overall positive rating from cluster schools was lower than from beacon schools, with 29 out of 58 responding schools reporting that the project was either 'very effective' or 'effective' in helping them overcome their challenges to LINE. This suggests that once the relationship was devolved to beacon schools the level of engagement became more variable, something reflected in comments from the cluster schools. These showed that the time beacon schools had to meet the needs of cluster schools varied, that cluster schools did not always engage immediately with the project, and that the identity of the project became less distinct:

- o I have no contact with anyone apart from a few newsletter emails. I am not sure what help is available or what Natural Connections actually does'.
- o 'It is a very supportive collaboration which I feel we have not yet become involved enough in'.
- o 'I'm unaware of the Natural Connections project. The outdoor work has just been started'.
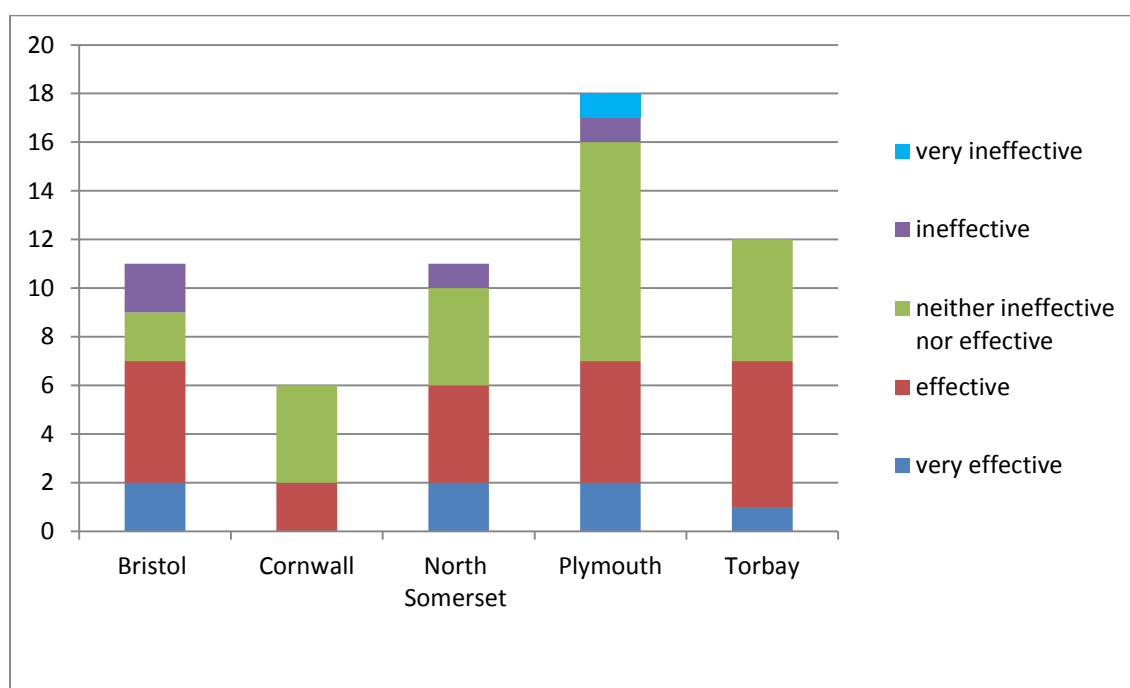
n=58: Bristol n=11, Cornwall n=6, North Somerset n=11, Plymouth n=18, Torbay n=12

Figure 18.4: Hub-wide cluster schools' views on the effectiveness of Natural Connections in helping overcome their challenges to LINE

Positive comments focused on five areas:

- o The **opportunity to network**: 'it's useful to connect with others, share ideas and practice, audit, signpost etc'.
- o **Giving confidence**: 'It is a way of hearing how others have overcome problems or finding others in a similar situations where by you can support each other in finding a solution'.
- o **Ideas and inspiration**: 'Access to CPD, inspiration'.
- o **Practical support**: 'My main support has been with my beacon school offering contact names. I was able to get raised beds and stepping stones put

down as a result, but we paid for the work. My beacon school was able to offer a lower price for the stepping stones through bulk buying'.

- o **Specific collaboration**: The project has 'given a focus on LINE for us, enabled us to work across the city in inter school collaborations'.

Comments also showed that, in some cases, LINE had either fallen down the list of priorities:

- o 'LINE has not been a priority this academic year, neither do we have a designated LINE coordinator. It is not part of the SIP, neither is money budgeted for LINE. We have had sporadic involvement with Chris (which is ALWAYS top-notch) but behind that – we have not used the woods/general outdoors as regularly as in the academic year of 12/13 or 13/14'.

Or the LINE lead was experiencing difficulty in embedding LINE in the school:

- o 'Having an in-house outdoor educator seems to make the other staff think it is not their responsibility'.

Taken together, these comments show a variable response to the project as it progressed to cluster schools, and they highlight the fact that introducing and then embedding LINE in schools takes time, strong commitment and internal support. There was no obvious pattern of comments between hubs.

Figure 18.5 below shows cluster schools' views on the effectiveness of the working relationship with their beacon school. Once again cluster schools reported variability, this time in their working relationships with beacon schools. Seventeen of the 58 schools that responded reported that this relationship was either 'very effective' or 'effective', with 33 schools reporting that this relationship was 'neither effective nor ineffective'. Eight schools said that the relationship was either 'ineffective' or 'very ineffective'. The high proportion of schools that viewed their relationship with the beacon schools as 'neither effective nor ineffective' may partly have been due to the hub leaders moving towards a hub-wide collaborative network by the time of the July 2015 school survey and, as we have seen in the comments above, partly due to cluster schools' variable levels of engagement with LINE. Once again, there was no obvious pattern of comments between hubs.

Positive survey comments showed that some cluster schools valued meetings to share experiences and ideas, and one respondent referred to their beacon school as 'a driving force'. Two commented that the relationship was in its early stages, with one reporting that 'I am just getting to know our Beacon Schools so haven't really capitalised on this relationship yet'; two reported that, although they were in contact with their beacon school, they had little time to attend the meetings/CPD that were provided. Just under half of the comments, however, reported that respondents either did not know who their beacon school was, or that there was little or no communication between them; this could be because either because

they had not requested any support or because the beacon school had not attempted to contact them.
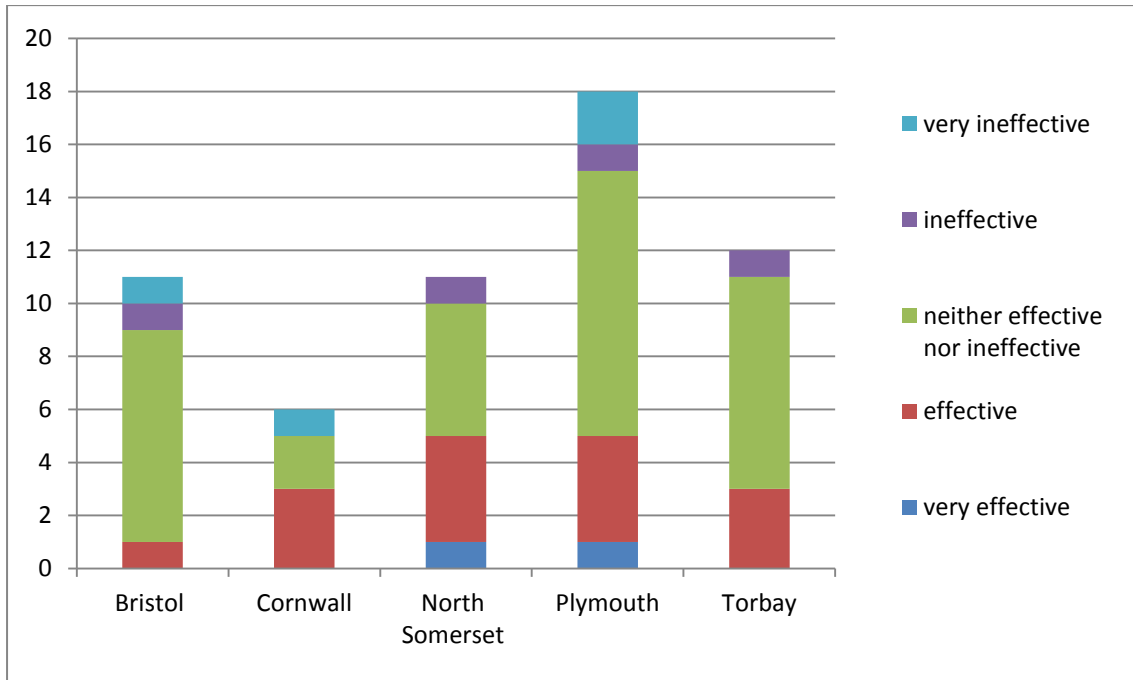
Figure 18.5: Hub-wide cluster schools' views on the effectiveness of the working relationship with their beacon school

Figure 18.6 below shows cluster schools' views on the effectiveness of their working relationship with other cluster schools.
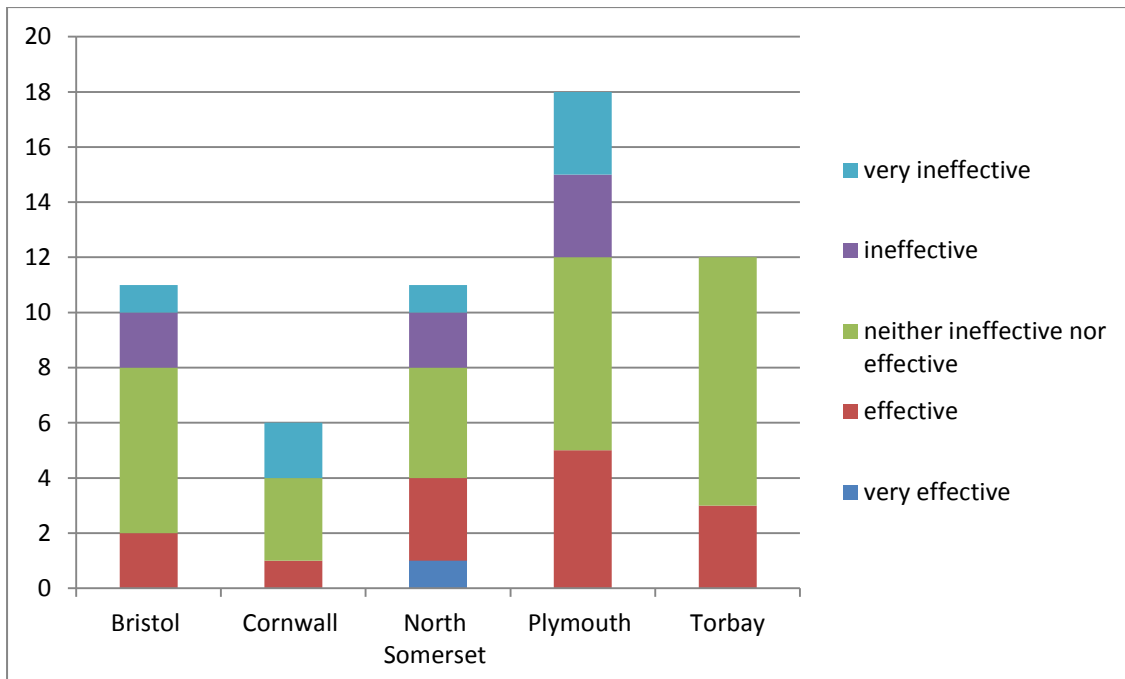
Figure 18.6: Hub-wide cluster schools' views on the effectiveness of their working relationship with other cluster schools

The results from this question are similar to those relating to the working relationship with the beacon schools; 15 of the 58 schools that responded found their working relationship with other cluster schools to be either 'very effective' or 'effective', 29 reported that this relationship was 'neither effective nor ineffective' and 14 found the relationship to be either 'ineffective or very ineffective'. In order to illustrate the differences between schools' levels of engagement, in the bullet points below we have categorised the comments according to the response.

- o Comments from schools rating the relationship 'effective' or 'very effective' all focused on the **collaborative aspect** of the project, reporting, for example: 'We have met through courses and bounced ideas off each other and are in contact through email. It has been great knowing that you (we) are not an island so to speak'. One of these comments focused on the **issue of time**: 'Could be further improved if all could attend each meeting'.
- o The two comments from schools rating the relationship 'neither effective nor ineffective' had **recently joined the project**, with one reporting: 'We have yet to link up with any schools'.
- o Those schools that rated the relationship either 'ineffective' or 'very ineffective' focused first, on the **lack of communication** between schools, for example: 'I do not know who these schools are'. The second reason related to schools' **differing priorities**: 'I must apologise for my nearly 100% lack of attendance at LINE meetings that Chris regularly organises. If I was able to attend, committing to the active engagement of LINE, then I would tick this as 'effective''. The third related to **time**: 'No time given to meeting up'. The last comment could also refer to the cost of cover when teachers are absent from the school.

KEQ 19. Did the profile of LINE activities change over time?

Project element and objective	Assumption
Brokerage: Support schools in identifying their needs and requirements	The brokerage element can match schools' ongoing needs with supply, leading to increased LINE activity

KEQ 19. Did the profile of LINE activities change over time?
19.1 What were project schools' types of LINE activity?
19.2 How did schools use LINE to deliver the curriculum?
19.3 What were the patterns of curricular LINE use in project hubs?
19.4 What were schools' non-curricular uses of LINE?

Data sources
School baseline survey, July 2015 school survey, June 2013 and 2014 school activity logs, November 2013 and 2014 school activity logs, May 2015 activity survey, school case studies.

Key points
• Schools increased curricular LINE activity and lunchtime and after-school LINE activity over the project lifetime.
• The four most frequently-taught subjects through LINE were PE, science, maths and English. Science was the core subject taken most frequently outside, and the percentage of maths lessons taken outside showed a noticeable increase from June 2013 to June 2014 (from 14 to 28 per cent).
• Schools varied in the amount of time that they used LINE for curricular delivery, and there were no discernible patterns of change within hubs.
• All case-study schools offered a variety of non-curricular LINE experiences to complement those related to the curriculum.
• Non-curricular LINE included Forest Schools, gardening, using school grounds facilities such as trim trails, farm visits, and off-site activities such as visiting local parks and/or adventure playgrounds.

NOTES
Some schools were uncertain whether to report PE as curricular LINE, so variations in this may be partly attributable to reporting practice. Others reported curricular LINE as gardening or Forest School without identifying the subject link so these have not been included in the curricular charts.
The small number of responding schools means that the data presented in this KEQ is illustrative and not generalisable across the project.
Direct quotations from school case-study interviews are in *'inverted commas and italics'*

This KEQ examines the change in types of LINE activity undertaken by schools during the project lifetime, schools' use of LINE to deliver the curriculum, and the changes in school

curriculum activity within the five hubs. In the final section we discuss the non-curricular use of LINE in case-study schools.

19.1 What were project schools' types of LINE activity?

Figure 19.1 shows the change in school-time outdoor curricular activity and other outdoor time in project schools. It was calculated by dividing the number of responding schools that reported LINE activity by the total number of responding schools, and multiplying this number by 100 to produce the percentage participating in different forms of outdoor activity. Figure 19.1 below shows that by the end of the project 100 per cent of schools engaged with curricular LINE activity, while the percentage of schools engaging in after-school and lunch time activity increased from 69 to 82 per cent. These high levels show that the majority of schools that were recruited undertook at least some curriculum-related learning in natural environments when they first joined the project. The percentage of schools reporting community and weekend activity remained relatively stable at 31 and 30 per cent. Seven per cent of respondents (nine schools) undertook no LINE activity at the time of the baseline survey. There was a statistically significant decrease in the proportion of schools that were not engaged with any LINE activities (p-value<0.001) over the project lifetime.

Baseline n=121; May 2015 activity survey n=44
Figure 19.1: Project level school activity (baseline and May 2015 activity surveys)

Figures 19.2 and 19.3 below show the same data broken down at hub level. Figure 19.2 shows that Bristol schools recorded initially higher levels of after-school activity (89 per cent) than schools in the other hubs, and this was the only hub to report that all schools undertook LINE activity in the baseline survey. The differences between the remaining four hubs were relatively small. One school from Cornwall, two from North Somerset and three each from

Plymouth and Torbay reported undertaking no LINE activity at the time of the baseline survey.

The notable findings from the May 2015 activity survey in Figure 19.3 below are that all responding schools reported undertaking curricular LINE activity and all schools reported LINE activity of some kind. Cornwall schools reported the most substantial increase in after-school and lunch time activity (from 65 to 91 per cent), while Bristol schools reported a decrease in this type of activity (from 89 to 60 per cent). North Somerset and Plymouth schools recorded lower community and weekend activity in the May 2015 survey (from 33 to zero per cent and from 39 to 14 per cent respectively), while Bristol, Cornwall and Torbay showed an increase in this type of activity (from 28 to 40 per cent, 30 to 36 per cent and 22 to 63 per cent respectively). Bristol schools were the only ones to report a decrease in after-school activity.
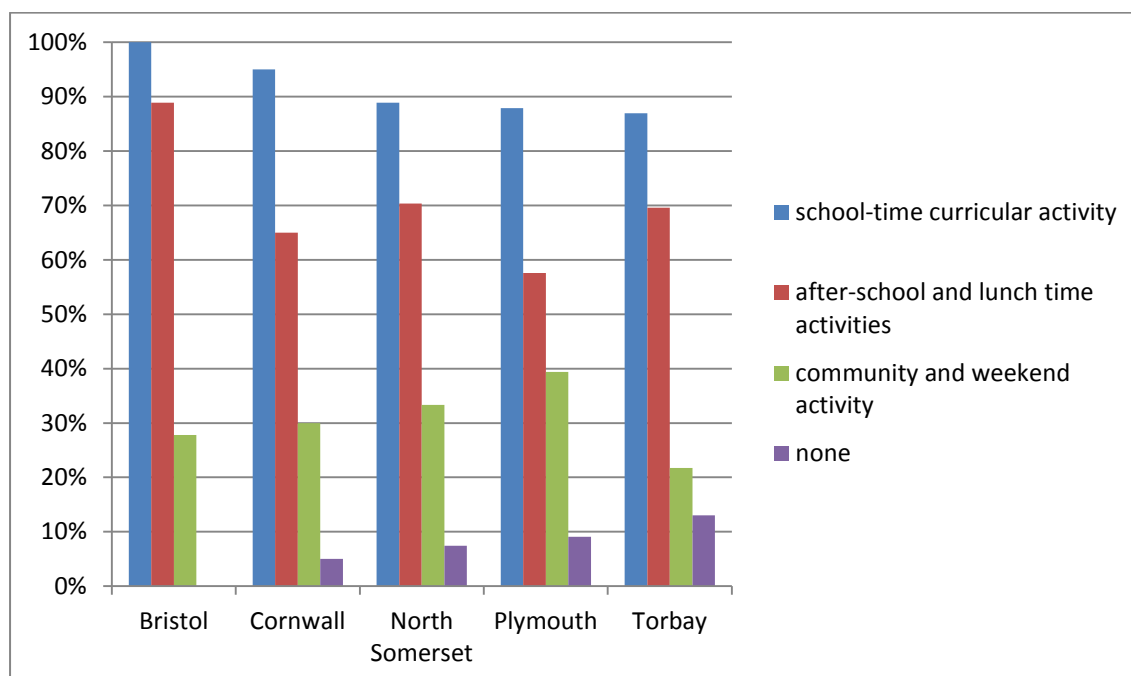
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
Figure 19.2: Hub level schools' baseline LINE activity
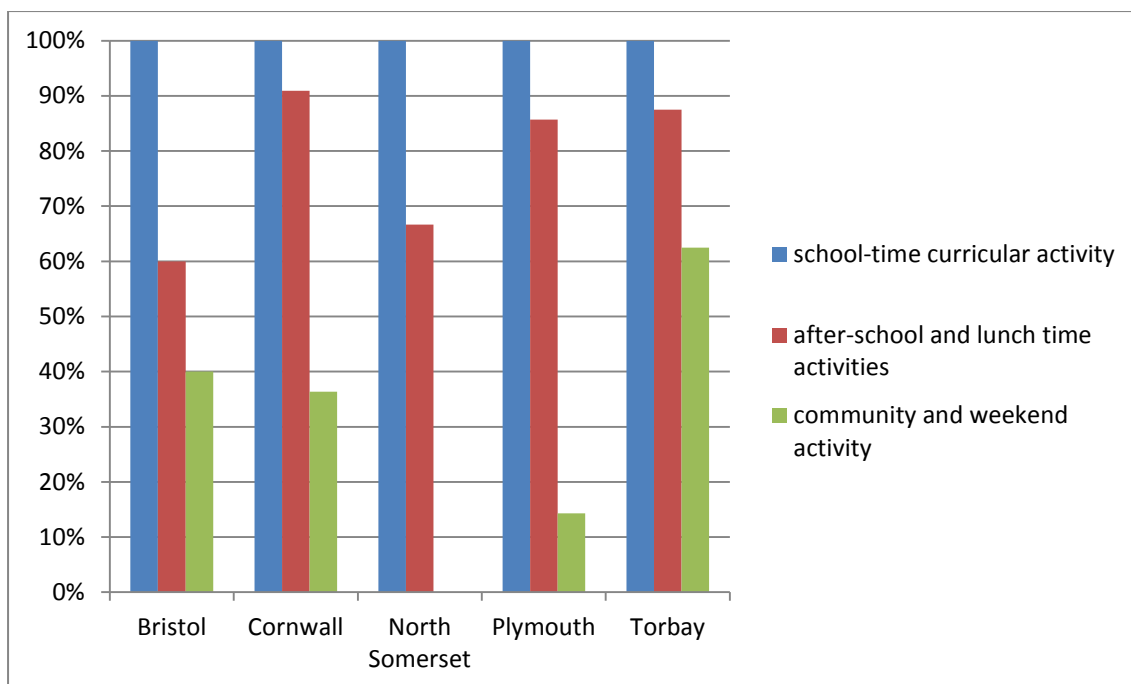
Figure 19.3: Hub level schools' May 2015 LINE activity

19.2 How did schools use LINE to deliver the curriculum?

Figure 19.4 below shows changes in the percentages of teachers' reported use of LINE in all school curriculum areas, using data from the four activity logs (June 2013 and June 2014; November 2013 and November 2014). The activity log was run at four points during the project June 2013, November 2013, June 2014 and November 2014. Each week for four weeks each class within project schools was asked to report on various aspects of LINE including the total number of sessions delivered outside, curriculum areas that were delivered through LINE, and the usefulness of LINE in delivering the curriculum. The data presented in the graphs below is a summary of these logs for those classes within project schools. Each response therefore represents the experience of one class per week. The percentages below were calculated by dividing the total number of responses showing a particular aspect of LINE by the total number of responses received. The activity logs therefore represent the relative use of LINE for responding classes and reported relative change over time.

The figure shows how, after PE lessons, the three main curriculum areas used in LINE activity were the core subjects of science, English and maths. Science was recorded as the core subject taken most frequently outside in all four activity logs, and the percentage of maths lessons taken outside showed a small increase from June 2013 to June 2014 (from 21 to 23 per cent). This increase was mirrored in the winter surveys, when the percentage increased from 18 per cent in November 2013 to 21 per cent in November 2014. The percentage of English lessons taken outside decreased in the corresponding time, although teachers still recorded higher levels of English than maths outside except in November 2014.

Schools' use of LINE to teach these subjects reflects both their dominance in the timetable and confidence that learning objectives, and by association standards, can be achieved by teaching outside the classroom.
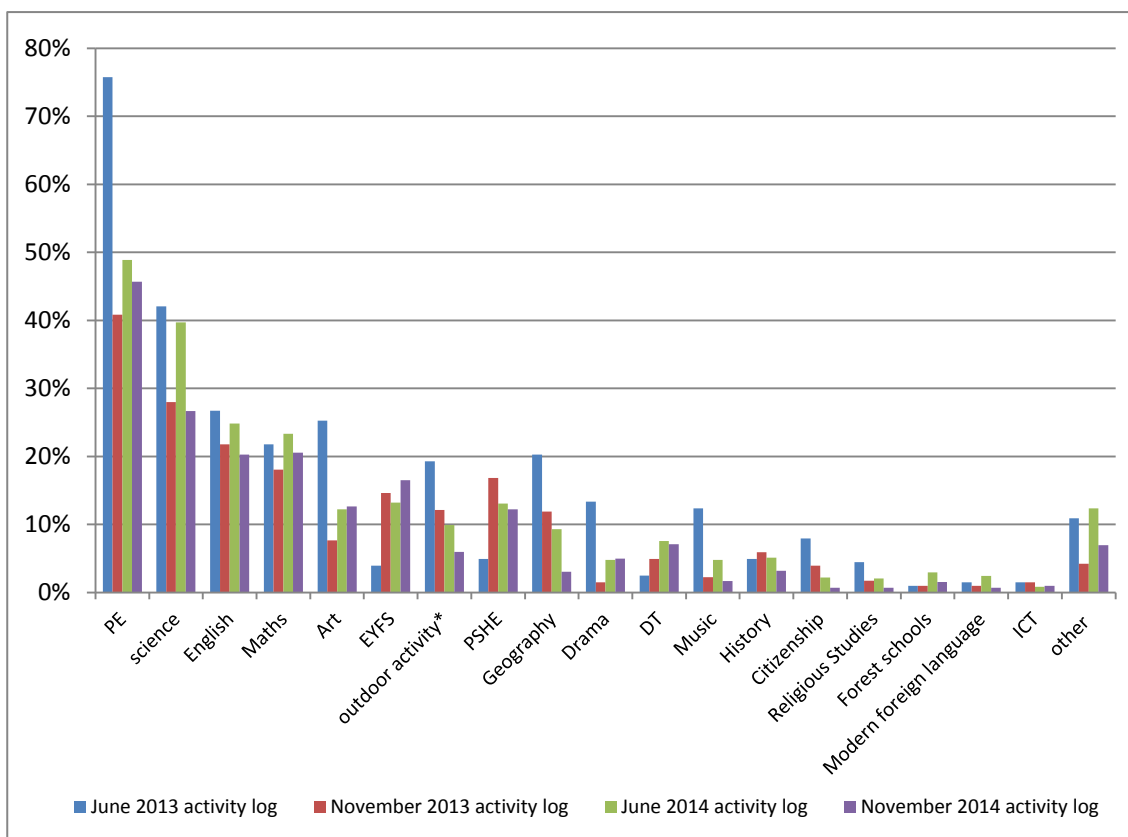
June 2013 activity log: n=7 schools, n=202 returns; November 2013 activity log: n=17 schools, n=404 returns; June 2014 activity log: n=38 schools, n=818 returns; November 2014 activity log: n=39 school, n=720 returns.

*outdoor activity includes gardening / horticulture, outdoor learning and other outdoor activities not directly delivering other areas of the curriculum. These and 'Forest School' have been included as categories because they were all cited by teachers completing the survey; while not defined curriculum areas, evidence from the school case studies shows they are often used as inspiration or source material for curriculum areas.
Figure 19.4: Use of LINE for different curriculum areas

19.3 What were the patterns of curricular LINE use in project hubs?

Figures 19.5-19.9 below draw on data from the four activity logs to show hub-level differences in the use of LINE to deliver PE, science, English and maths. The notable features of each hub were the consistency of the percentage of LINE lessons in all four subjects in Cornwall, the steady increase in the percentage of responses indicating that maths and English lessons were taken outside in Bristol, the high percentage responses indicating science lessons were taken outside in Torbay and Plymouth, and the high percentage responses indicating PE lessons were taken outside in North Somerset.

Figure 19.5 shows that **Bristol** schools responded to three surveys (November 2013; June and November 2014). The percentage of responses indicating that PE lessons were taken

outside varied between 23 (November 2013), 50 (June 2014) and 45 per cent (November 2014). The percentage of responses indicating that science lessons were taken outside were stable in the first two surveys (30 and 39 per cent respectively), and then decreased to 16 per cent (November 2014). The percentage of responses indicating that English lessons were taken outside increased steadily from 18 per cent (November 2013) to 28 per cent (November 2014). The percentage of responses indicating that maths was taken outside, however, showed the strongest increase (22 per cent in November 2013; 38 per cent in November 2014), perhaps reflecting the local drive to improve maths at that time. The curriculum area with the highest level of responses indicating that it was taken outside was PE (50 per cent, June 2014) and the lowest was in science (16 per cent, November 2014).
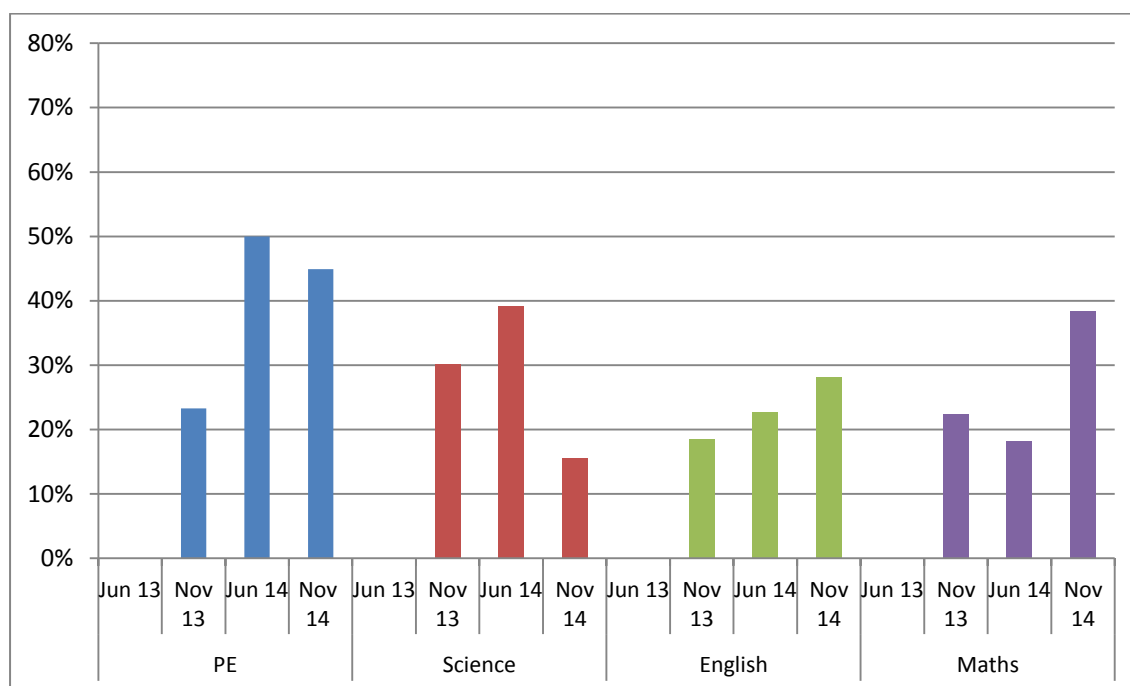
November 2013 activity log: n=5 schools, n=103 returns; June 2014 activity log: n=4 schools, n=110 returns; November 2014 activity log: n=7 schools, n=167 returns

Figure 19.5: Use of LINE to deliver PE, science, English and maths in Bristol hub

Figure 19.6 below shows that schools from **Cornwall** responded to three surveys (November 2013; June and November 2014). The most notable finding is the consistency in the percentage of responses of lessons taken outside in these schools. Thirty-six (November 2013), 31 (June 2014) and 37 per cent (November 2014) of responses indicated that science lessons were taken outside; in English the respective percentages were 33, 24 and 32; in maths, the respective percentages were 38, 26 and 35. The exception was PE, which fluctuated between 44 (November 2013) and 18 per cent (June 2014). PE was the curriculum area with the highest percentage of responses indicating it was taken outside (44 per cent, November 2013) and also the lowest (18 per cent, June 2014).
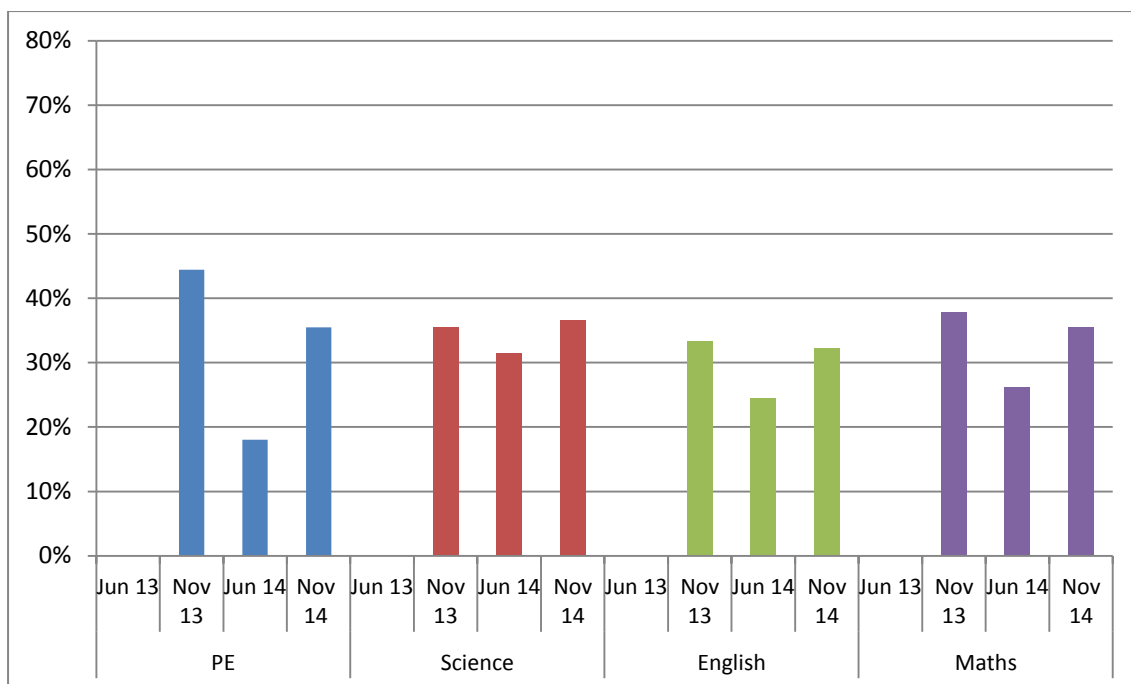
November 2013 activity log: n=4 schools, n=45 returns; June 2014 activity log: 14 n=6 schools, n=172 returns; November 2014 activity log: n=7 schools, n=93 returns

Figure 19.6: Use of LINE to deliver PE, science, English and maths in Cornwall hub

Figure 19.7 below shows that **North Somerset** schools responded to two surveys (June and November 2014). Seventy-four per cent of responses indicated that PE was taken outside June 2014 and 63 per cent of responses indicated PE was taken outside in November 2014. The percentage of responses indicating that science was taken outside decreased from 30 to 23 per cent; the percentage of responses indicating that English was taken outside decreased from 46 to 25; and the percentage of responses indicating that maths was taken outside from 33 to 14 per cent between the two surveys, with all schools perhaps responding to the less favourable autumn weather by staying indoors more. PE was the curriculum area with the highest percentage of responses indicating it was taken outside (74 per cent, June 2014) and the lowest was in maths (14 per cent, November 2014).

June 2014 activity log: n=8 schools, n=109 returns; November 2014 activity log: n=8 schools, n=128 returns
Figure 19.7: Use of LINE to deliver PE, science, English and maths in North Somerset hub

June 2013 activity log: n=7 schools, n=202 returns; November 2013 activity log: n=7 schools, n=247 returns;
June 2014 activity log: n=14 schools, n=367 returns; November 2014 activity log: n=10 schools, n=246 returns.
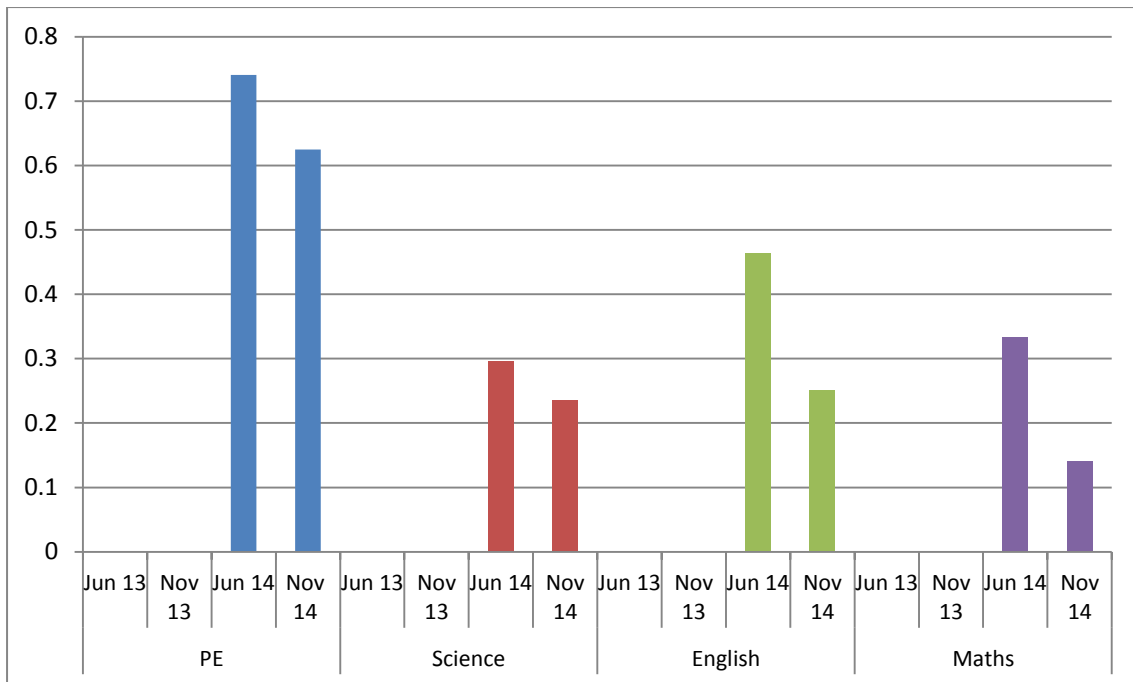**Figure 19.8: Use of LINE to deliver PE, science, English and maths in Plymouth hub**

Figure 19.8 above shows that **Plymouth** schools were the only ones to respond to all four surveys. Initial high levels of responses indicating that PE lessons were delivered outside (76 per cent in June 2013) decreased subsequently to between 55 per cent (June 2014) and 44 per cent (November 2014). This could reflect the small sample size as well as Plymouth schools' initial enthusiasm to teach outside, with an initial focus on PE. The percentage of responses indicating that science lessons were taken outside was stable with 42 (June

2013) and 44 (June 2014) per cent in the summer months, and remained stable over the winter months (25 per cent in November 2013; 23 per cent in November 2014). The percentage of responses indicating that English lessons were taken outside remained relatively stable between 27 (June 2013) and 21 per cent (June 2014), although this decreased to 12 per cent in November 2014. The percentage of responses indicating that maths lessons were taken outside was also relatively stable, between 22 (June 2014) and 19 per cent (June 2014 in the summer and 13 per cent (November 2013) and eight per cent (November 2014)). PE was the curriculum area with the highest percentage of responses indicating it was taken outside (76 per cent, June 2013) and the lowest was in maths (eight per cent, November 2014).

Figure 19.9 below shows that **Torbay** schools responded to three surveys (November 2013; June and November 2014). In contrast to schools in the other hubs which reported that PE was the subject most frequently taken outside, science was most popular subject for LINE: 33 per cent of responses indicated teachers had delivered science through LINE in November 2013, 54 in June 2014 and 55 in November 2014. PE had strong variation, ranging from 22 per cent of responses indicating lessons were taken outside in November 2013 to 51 in June 2014. The percentage of responses indicating that English lessons were taken outside ranged from 22 per cent (November 2013) to 15 (June 2014) and 9 (November 2014); that of maths lessons had some variation with 22, 31 and 15 per cent respectively. Science was the curriculum area with the highest percentage of responses indicating it was taken outside (54 per cent, June 2014) and the lowest was in English (nine per cent, November 2014).
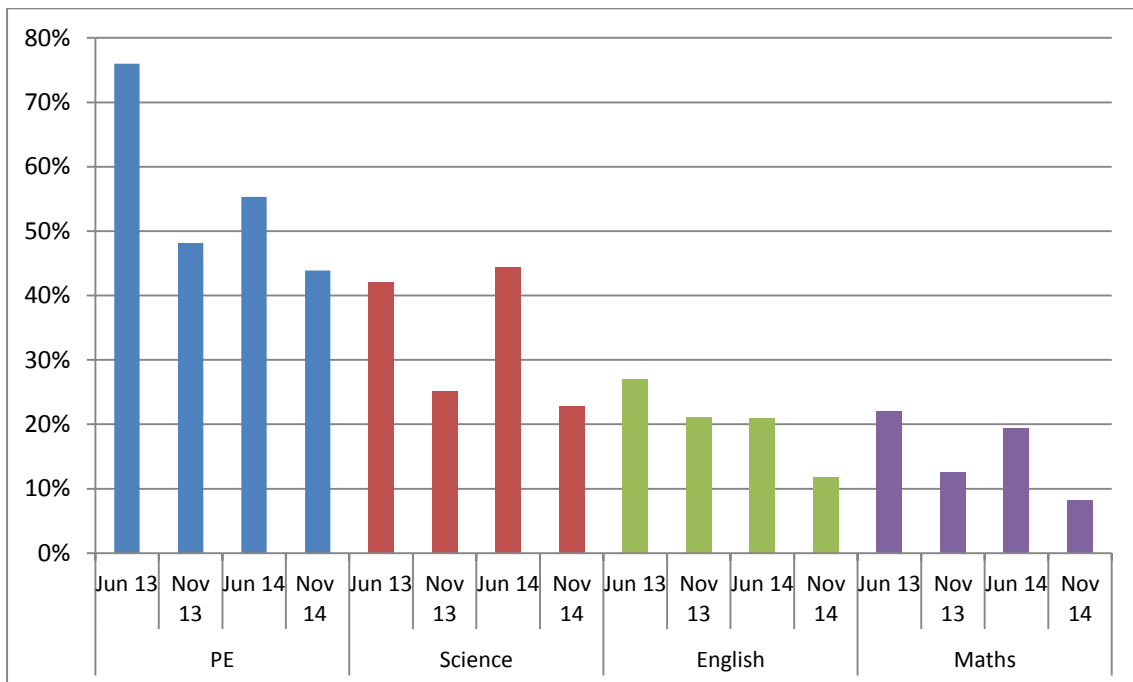

November 2013 activity log: n=1 school, n=9 returns; June 2014 activity log: n=6 schools, n=61 returns; November 2014 activity log: n=7 schools, n=86 returns

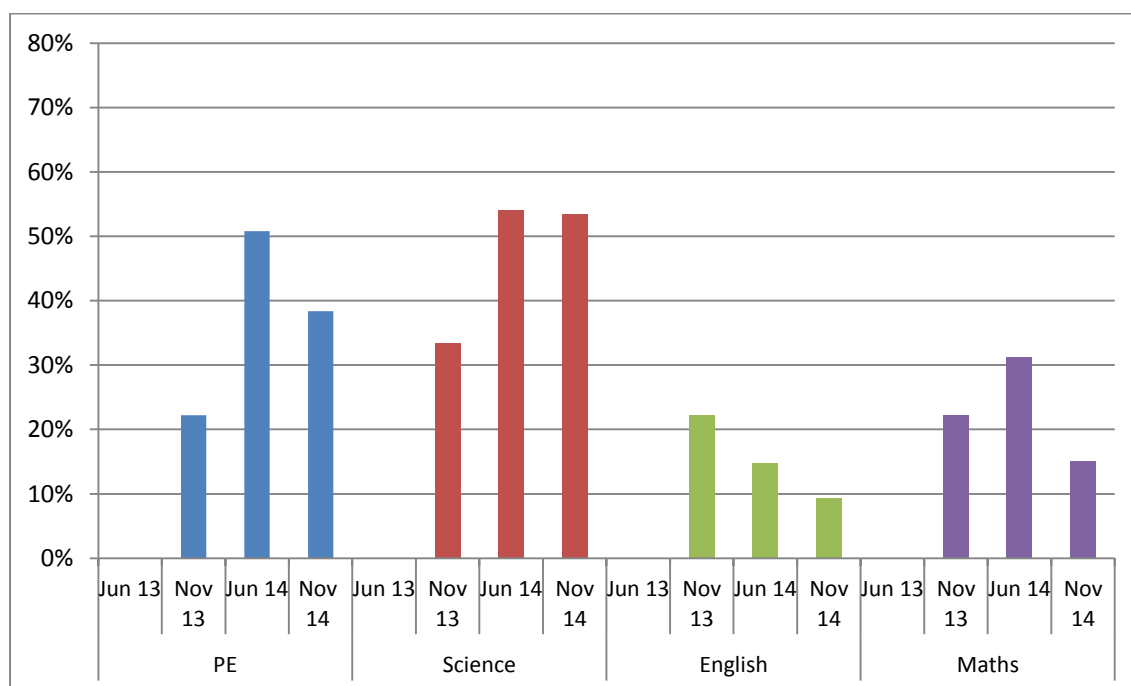**Figure 19.9: Use of LINE to deliver PE, science, English and maths in Torbay hub**

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See KEQ 4 for project participants' views on the impact of LINE on children's curricular and non-curricular learning, KEQ 6 for schools' curricular use of LINE and KEQ 7 for the use of LINE in school improvement. Given the detailed discussions in these KEQs, in the final section in this KEQ we focus on the non-curricular use of LINE in project case-study schools.

19.4 What were schools' curricular and non-curricular uses of LINE?

Three of the 24 case-study schools reported that one of their primary motivations for engaging with LINE was directly to raise children's attainment, while other schools had wider primary aims for LINE that included providing foundational factors for pupil attainment such as enjoyment and engagement with learning, confidence, improved behaviour and greater social skills. KEQ 4 discusses these aspects of LINE in detail. In practice these broad aims for LINE resulted in all case-study schools offering a variety of curricular and non-curricular LINE experiences to complement those related to the curriculum.

Curricular use of LINE was varied and covered a range of curriculum areas. The core curriculum areas of English, maths and science were most commonly reported along with PE, and all schools reported using LINE for at least one of these areas. PE was not reported in the case studies as frequently as English, maths and science, perhaps reflecting the importance of natural environments in enabling learning in these areas as opposed to providing a suitable space as for PE. Most schools also reported that LINE was used for non-core curriculum subjects, specifically for history, geography, art, music, drama, foreign languages, and PSHE, although these were less well represented in the LINE activity logs. Teachers in one school argued that LINE provided the foundation for curricular learning, and reported that their LINE work focused '*on the national curriculum skills and transferable skills that would then transfer back into the classroom.'* LINE sessions in this case were structured, frequent and regular but did not teach curriculum knowledge.

Schools reported that LINE enabled the teaching of the core curriculum in a number of different ways:
- Most schools reported that they taught maths outside, and that they valued LINE for its contribution to *'making abstract concepts real',* often for **particular concepts** which children often found difficult, for example shape and area. A number of case-study schools reported using LINE in maths for groups of **pupils who needed extra support** in general, as it was felt to make the subject more accessible for those who struggle with classroom-based teaching in this subject (see KEQ 4)
- Most schools reported that they taught science lessons outside. Schools valued LINE for the contribution it made to their teaching of **natural science,** such as in work on habitats or growing. It was also valued by schools for its contribution to **physical science** and work on concepts such as acceleration. A teacher at one school summarised the extra contribution LINE made by commenting: *'You can do loads of science activities outside. Sitting in a classroom looking at a worksheet is very*

boring … So it's much better to actually go out and, maybe search for mini-beasts … And that helps with their [pupils] *speaking and listening and their overall awareness of the world'.*

- Using LINE for English / literacy was reported by most schools, and was valued for the **creativity** it could bring to pupils' work along with providing them with first hand **experiences** to draw from when writing. An example of this kind of activity was a giant footprint created on the field to tie in with the Iron Man story by Ted Hughes. This created a *'real life'* situation for the children and provided English and maths opportunities; the teacher commented that '*it's just a really good way of getting them to write creatively ... and give them a purpose for all their learning'.*

Over half of case-study schools made specific reference to, or demonstrated, cross curricular activity. The degree of (and need for) integration of the curriculum varied between schools and by activity. Examples included

- Drawing on outdoor experiences for report-writing or creative writing in English.
- Working on a number of curriculum areas during one-off sessions. One school covered maths (perimeter and area), history and PSHE (first world war) and science (growth/gardening) in the process of measuring out and planning a commemorative poppy patch in the school grounds
- Collecting material or ideas for later use from Forest School sessions (e.g. in art or design and technology). One school used a range of autumnal leaf colours to create 'firework art' back in class
- Project work:
    - o On curriculum topics. For example one school delivered a 'Stone Age experience' which was delivered almost entirely outside over the course of a term to demonstrate possibilities for teaching the curriculum through LINE, including story planning with twigs and sticks. Children rehearsed their story round the campfire rather than writing drafts; their final piece of work in the classroom drew on a photo of their story map, which had been practiced through acting and drama outside.
    - o On a one-off project. For example developing an area of the school grounds and linking all areas of the curriculum to the project development. In one school children identified the project of building a new donkey shed on the school farm; they then researched options, made plans, presented to governors and negotiated with suppliers to complete the shed.

Non-curricular uses of LINE included:

- **Forest School** or Forest School-type activity. Twenty-three of the 24 case-study schools offered such activities, and the one remaining school planned to offer Forest School activities in the near future; two-thirds of case-study schools had trained Forest School staff.
    - o In a substantial minority of schools, Forest School was a **stand-alone activity** in which there were no direct links to classroom work. Case-study schools

reported that Forest School activities were valued for their wider benefits such as giving children the opportunity to have new experiences they did not encounter at home: *'things like playing in mud, getting wet, exploring new environments, bug hunting, looking at plants and how they work … is really liberating for them* [pupils]'*.*

- o A few **integrated their Forest School experiences with the curriculum**. One school valued this approach as it enabled pupils to draw on experiences for curriculum content: Forest School '*contextualises the learning and provides experiences children can draw on back in class'.*
- o The majority of schools use a **mixed approach,** with some sessions regarded as child-initiated and others linked to particular topics when there was a convenient fit. One school reported that: *'The outdoors for us is a catalyst for cross-curricular learning and working and so your starting point … is outside and you then develop it inside'.* Work inspired by Forest School in this school included making rustic furniture, making and selling reindeer decorations from natural materials, and making firework art with natural materials on black card in November.

- **School gardens**. Almost all case-study schools had gardens, which were often aligned to curricular subjects such as plants and growth. Over half the case-study schools, however, ran gardening clubs or offered extra-curricular gardening activities on an ongoing basis; these included planting, watering, harvesting as well as maintaining and developing sites.

- **School grounds facilities**. Case-study schools showed us a wide range of facilities that included trim trails, nature trails, mountain bike tracks, slack lines, climbing equipment, sensory areas, wildlife habitats, ponds and fire pits, all of which encouraged active outdoor participation.

- **Farm**. One case-study school had an onsite farm with a donkey, a model cow that could be 'milked', sheep, pigs, chickens, ducks and guinea pigs; the grounds also contained a wildlife area, a growing area for vegetables and a willow dome. These facilities were used for a variety of curricular and enrichment activities that included gardening, learning animal husbandry and playing outside. Other case-study schools kept a variety of chickens, guinea pigs, rabbits and ferrets to encourage children's sense of responsibility in caring for these creatures.

- **Farm visits**. Several schools spoke of visits to local farms where pupils learned about:
    - o Beekeeping
    - o Sheep shearing
    - o Animal welfare with pigs, sheep, cows, goats, horses, guinea pigs, chickens and ducks
    - o Fruit and vegetables
    - o Fishing at local fish farms.

- **Other off-site activities**. Case-study staff and pupils spoke of activities such as:
    - o Visiting local parks and adventure playgrounds

- o Visiting the beach
- o Undertaking the Ten Tors expedition
- o Sailing and kayaking
- o Visiting zoos and donkey sanctuaries.

KEQ 20. Which hub leader models worked well / less well? What factors influenced this?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can match schools' ongoing needs with supply, leading to increased LINE activity
KEQ 20. Which hub leader models worked well / less well? What factors influenced this? **20.1** What were the hub models of delivery? **20.2** What were the levels of school investment in LINE in each hub? **20.3** What were the main influencing factors on delivery models?	
Data sources Hub leader interviews, June 2013/2014 and November 2013/2014 activity logs, school baseline survey, July 2015 school surveys, school case studies, central team instruments	
Key points • It was difficult to judge whether particular models worked better than others because of the differing contexts and types of hub leader organisation. • Each model of delivery had its strengths and weaknesses. • Levels of school investment in LINE were determined by a complex combination of factors, principally: different hub recruitment strategies, differing hub geographical environments, schools' varying initial levels of engagement with LINE and schools' further capacity and willingness to engage with LINE. • Influencing factors on hub models included hub leader capacity, the nature of their expertise, the extent of their networks and their geographical location.	

In what follows we have set out tables of each hub leader's model against the main responsibilities (described in KEQ 15), apart from 'communication' and 'web service'. This is because we have little evidence of the ways in which hub leaders communicated with other project participants, and because all hub leaders quickly decided that supporting the Growing Schools website was not one of their priorities. We then show the representation of school investment in LINE from KEQ 5, which demonstrates the differing levels of investment within and between hubs, and allows possible connections between the hub models and the differing levels of school engagement with LINE. Next we discuss the influencing factors on hub models, including project core elements and different roles within hubs. Finally we summarise the key points to draw out learning points for future delivery.

20.1 What were the hub leader models of delivery?

Table 20.1: Bristol

Project strategy (KEQ 3, 15, 28)	Beacon school recruitment (KEQ 3)	Beacon school support (KEQ 24)	All school support (KEQ 7, 12, 14, 16, 23, 24)	Volunteer engagement (Volunteer KEQs)	Evaluation / data collection (Evaluation KEQs)	Sustainable delivery
Flexible, strategic approach in which hub leaders responded to their own reflections and school feedback to modify model as they felt appropriate. Were clear that recruitment target of 40 schools would not be met during project lifetime. Worked to create a cohesive model across the hub that had a common understanding of the aims of the project; then developed clear offer to all recruited schools that was based on a pedagogy in which LINE enhances teaching. Project branded as 'the LINE collaboration' rather than NCDP.	Open call for applications; weighted scoring system to appoint beacon schools. Existing hub leader networks provided most applications. Seven beacon schools recruited that were evenly distributed over the different socioeconomic areas of Bristol. No secondary schools (beacon or cluster) were recruited to the project. 15 cluster schools meant a project total of 22 schools.	Face-to-face initial meetings, followed by further support with school needs articulated through action plans. Regular beacon school meetings. Commented on disparity of beacon school needs. Schools received funding for LINE development and supply costs for staff to attend meetings and/or CPD.	Discarded individual beacon/cluster model early in project in favour of all beacons supporting all cluster schools; later changed to a non-hierarchical supportive network. Regular hub-wide network meetings for all schools and LINE providers (held immediately after beacon school meetings). Developed formalised CPD programme in partnership with North Somerset hub, responding to school need. Annual LINE conference. Developed Wild Time for Schools web-based app (LINE resources)	Strategic approach to engagement with Volunteer Bristol and natural environment groups. Tested schools' engagement with volunteers further through a small amount of additional funding; this helped hub leaders to understand the issues better but they concluded they did not have the resources to continue with volunteer development within the project.	Did not want central team contacting schools for data returns. Managed all evaluation communication with schools but supportive of evaluation and its possibilities for information. Project return rates were below the overall project rates until the July 2015 school survey; July 2015 return rate 68%. Investigated alternative qualitative research with the University of Western England to give them insight into project	Commented that sustainability was *'the whole point of the project'*; hub leader organisation a large provider of CPD in Bristol, so sustainable remit fitted well. Felt a graduated approach to recruitment would have led to a more sustainable project. Clear evidence of systems to enable sustainability including Wild Time for Schools app and Volunteer Bristol engagement; responsive nature of project was focused on developing the model's sustainability. Found that no school was willing to take on responsibilities of the hub leader role. Model may be adapted again to a series of half-day conferences (with charge for delegates).

Table 20.2: Cornwall

Project strategy (KEQ 3, 15, 28)	Beacon school recruitment (KEQ 3)	Beacon school support (KEQ 24)	All school support (KEQ 7, 12, 14, 16, 23, 24)	Volunteer engagement (Volunteer KEQs)	Evaluation / data collection (Evaluation KEQs)	Sustainable delivery
Clear focus for project delivery with focus on creating sustainable systems. Adopted beacon/cluster model and tested this all through the project, with an emphasis on appointing a strong LINE lead in project schools. Believed the target for recruitment would be met after project lifetime. Project branded as the 'LINE project'. Clear project offer that was based on developing LINE in clusters of schools to benefit pupils. Aimed to find a balance between creating a cohesive project and allowing schools to develop their own LINE practice.	Targeted call for applications, followed by a weighted scoring system to finalise recruitment. Existing hub leader networks provided most applications. Wanted to test project delivery through recruiting a representative sample of Cornwall's schools by size and sector; discovered that a small school did not have the capacity to be a beacon school. Seven beacon and 13 cluster schools meant a project total of 20 schools.	Initial strong face-to-face support, then ongoing termly visits. Collective meetings half yearly were found to be challenging due to the distances involved for schools. Some direct support where needed to recruit cluster schools. Schools received funding for work linked to LINE development. Model moved away from the beacon/cluster structure towards a more general system of support at the end of the project.	Main project support for cluster schools was through beacons, although hub leaders offered some face-to-face support. LINE leadership training was provided for LINE leads. Signposting to quality CPD opportunities such as Wild Tribe, although schools needed to sign up to an additional partnership to access this support. Signposted schools towards different LINE providers, but believed that schools should learn to deliver LINE themselves and not be dependent on LINE providers. Felt that LINE providers should have had more training to support project.	Wanted to structure and accredit volunteer engagement. Initial discussions with Volunteer Cornwall and Plymouth University to do this, but had no resources to take these conversations further.	Hub leaders were enthusiastic about and supportive of the evaluation. Wanted to have a research element to the delivery but this was not taken up by schools. Return rates for surveys from schools were disappointing: July 2015 return rate 60%	Work undertaken on LINE leadership training and Wild Tribe CPD was part of the sustainability strategy of formalising sources of support for schools beyond the project.

Table 20.3: North Somerset

Project strategy (KEQ 3, 15, 28)	Beacon school recruitment (KEQ 3)	Beacon school support (KEQ 24)	All school support (KEQ 7, 12, 14, 16, 23, 24)	Volunteer engagement (Volunteer KEQs)	Evaluation / data collection (Evaluation KEQs)	Sustainable delivery
Responsive to individual school requirements. Quickly developed a partnership with the Bristol hub, and worked with them wherever possible. Recruited a high number of schools (27), but the majority were not strongly engaged with LINE or the project. Cluster schools were recruited by both hub leaders and beacon schools in tandem. Project branded as Natural Connections. Project offer emphasised the benefits of Forest School and school grounds improvement.	Open call for applications. Disappointing response meant that no scoring system was needed. Limited project interest in the original geographic hub area, so this was extended. Hub leaders did not have extensive existing education networks to support the recruitment process. Six beacon and 21 cluster schools meant a project total of 27 schools.	Initial face-to-face support. Beacon school meetings were organised but found to be challenging due to the distances between schools. Schools received funding for school grounds development and cluster recruitment. Support was intermittent at start of project, while hub leaders waited for greater numbers to join the project, and interest from some waned.	Leadership of three mini-hubs in areas of stronger interest was devolved to partners from schools. Hub leaders worked to provide support with Bristol networks of a formalised CPD programme, annual conference and Wild Time for Schools app. Additional CPD support was provided for schools that were too far away to access CPD from Bristol. Hub leaders supported some cluster schools directly, which was time-intensive and resource-heavy.	Local support for schools by hub leaders, based on school interest and/or request. Hub leaders initiated a successful 'skills audit' for parents as a tool to initiate activity.	Supportive of the evaluation, but only one case-study school was recruited from this hub. Survey return rates from schools were disappointing: July 2015 return rate 54%.	Project sustainability was linked with the joint work undertaken with the Bristol hub leaders and partners in the three mini-hubs.

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Table 20.4: Plymouth

Project strategy (KEQ 3, 15, 28)	Beacon school recruitment (KEQ 3)	Beacon school support (KEQ 24)	All school support (KEQ 7, 12, 14, 16, 23, 24)	Volunteer engagement (Volunteer KEQs)	Evaluation / data collection (Evaluation KEQs)	Sustainable delivery
The Plymouth team was the first hub leader to be appointed, and they developed several ideas used by other hub leaders (e.g. weighting system for recruitment; beacon school meetings). Theirs was the closest to the tender model, but it slowly moved towards a more dynamic, collaborative hub-wide approach. This hub recruited the highest number of schools (33). Project branded as Natural Connections. Offer clearly defined in terms of CPD, networking and resources.	Targeted call for applications, followed by a weighted scoring system to finalise recruitment. Well-developed, existing hub leader networks and knowledge of schools in the area supported the application process. Seven beacon and 26 cluster schools meant a project total of 33 schools.	Face-to-face support and initial networking beacon school meetings. Schools received funding for grounds development and joint school LINE activities. Brokered school grounds support from the Devon Wildlife Trust for beacon schools?.	Overarching network open to all including LINE providers; some strong relationships between beacon and cluster schools developed. CPD provision based on in-house expertise, offer developed with partnerships and an overview of school need; other practical support offered through team expertise (e.g. in woodland development). Hub leaders did not encourage participation in external CPD offers, as the numbers and variety were felt to be confusing for project schools.	Supported testing of Volunteer Development Officer role by enabling access to Plymouth beacon schools. Recognised the challenges of volunteering and tested some of these with small funded project but focused on other aspects of the project.	Hub leaders were supportive of the evaluation, and piloted and fed back on some surveys. The team managed many externally-funded projects and were cognisant of evaluation demands. Return rates were generally high from school surveys; July 2015 return rate 75%.	Hub leaders aimed to develop a sustainable model: *'There is no point firing our schools up for a two year project. We are firing them up for life. That's the notion'.* Integration of Natural Connections into different areas of hub leaders' work has enabled a clear, ongoing offer to project schools.

Table 20.5: Torbay

Project strategy (KEQ 3, 15, 28)	Beacon school recruitment (KEQ 3)	Beacon school support (KEQ 24)	All school support (KEQ 7, 12, 14, 16, 23, 24)	Volunteer engagement (Volunteer KEQs)	Evaluation / data collection (Evaluation KEQs)	Sustainable delivery
1st hub leader (HL1): planned to build on existing interest and expertise to effect whole school change in a small number of schools. Responsive to individual school needs through the LifeLINE CPD network, but less responsive to project requirement for high levels of school recruitment. Project identity was the LifeLINE CPD network, which was attended only by schools interested in LINE. **2nd hub leader (HL2):** flexible and pragmatic approach with the aim of bringing schools together to develop a sustainable network of schools engaged in the development of LINE practice. Project re-branded as Natural Connections.	**HL1:** Discussion with interested schools, with the aim of recruiting them gradually to the project. Hub leaders had strong links with a small number of schools but no wider networks in the area. Six beacon and 17 cluster schools meant a project total of 23 schools. (Note: 10 cluster schools were recruited by HL2 between November 2014-March 2015)	**HL1**: strong support offered through the LifeLINE network and individual discussions for small number of schools. Funding available for grounds and LINE activity development, and cluster recruitment. **HL2:** introduced beacon school and wider networking meetings.	**HL1:** through LifeLINE network but not inclusive or flexible for schools that were undecided about LINE. **HL2:** wider network meetings, signposting to CPD, funded places on specific CPD for schools, development of resources by schools for schools, links with local curriculum network and LINE providers	**HL1**: supported volunteer development but engaged little with the process of supporting schools with recruitment and/or management.	**HL1:** resistant to the proposed evaluation plans. Initially managed all evaluation communication with schools. Return rates disappointing at this point. **HL2:** supportive of evaluation and communicated its importance to schools; supported process of data collection by completing surveys with some school LINE leads. July 2015 return rate 68%	**HL1:** LifeLINE was meant to be sustainable and ownership to taken over by schools, but this CPD network was not continued after change in hub leader. **HL2:** made links with Torbay Curriculum network, CPD and LINE providers with the aim of creating a sustainable network over the long-term.

20.2 What were the levels of school investment in LINE in each hub?

In Figure 20.1 below we have reproduced Figure 5.1 from KEQ 5, in which we drew on data from the baseline, July 2014 and July 2015 school surveys to estimate schools' investment in LINE. We used six criteria as a proxy to measure this investment: teacher involvement with LINE (over half in the school involved in LINE); teaching assistant (TA) involvement (over half involved in LINE); staff attendance at CPD sessions; LINE documentation; budget spent on LINE; and structural changes to school grounds. The criteria were selected to help to represent school LINE investment over LINE action (e.g. staff time), strategic investment (e.g. LINE documentation) and ongoing commitment (e.g. CPD). Schools reporting none, one or two of these criteria were judged as making low investment; those reporting three or four as making medium investment; and those reporting five or six as making high investment in LINE. We included data from all schools that responded to at least one survey, and used the relevant information from the most recent survey completed. The overall picture is thus one of schools' reported investment in LINE over the time in which they were involved in the project.

The representation in Figure 20.1 assists in understanding the levels of investment in project schools and within and between hubs, but should be treated with caution first, because we have incomplete information on these schools' LINE activities (only 25 from 125 schools completed all the surveys) and secondly, because understanding school investment in LINE is highly complex. Different hub recruitment strategies, differing hub geographical environments, schools' varying initial levels of engagement with LINE and schools' further capacity and willingness to engage with LINE all influence the levels of resource that schools are prepared to invest. In addition, the difficulties of embedding LINE across large secondary schools means that a hub such as Bristol, which recruited no secondary schools, may initially appear more successful at engaging schools with LINE than one such as Cornwall, which recruited three secondary schools. We discuss these issues further in Section 3.
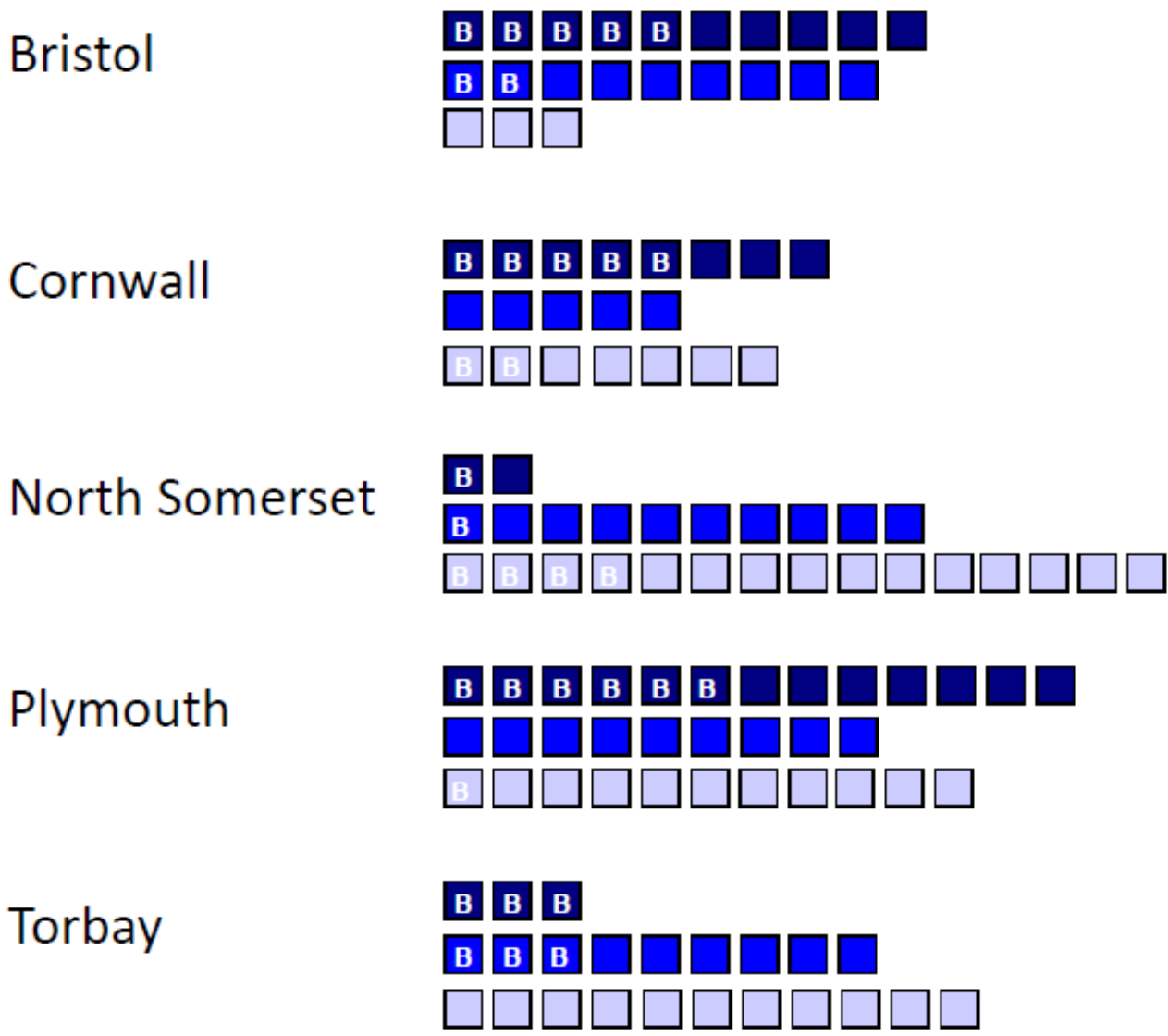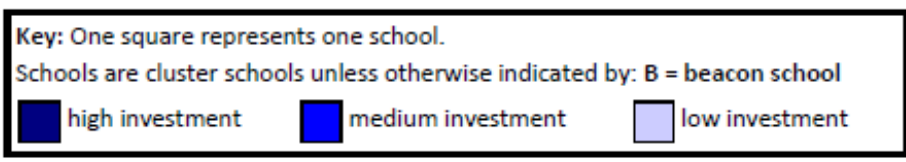
Figure 20.1: Representation of school investment in LINE by hub and school type (n=125)

20.3 What were the main influencing factors on hub leader delivery models?

Figure 20.1 above shows wide variation between school levels of investment, but influencing factors on the hub leader delivery models need to be taken into account:

Bristol hub leaders were highly strategic in their approach to school recruitment and support, and in response to school uncertainty, quickly developed a clear offer to potential schools. This seemed to result in an overall high level of investment from their project

schools. Enabling factors, however, were the small geographical area, the high number of potential project schools, the hub leaders' own strong connections in the area and their expertise in CPD, one of the core brokerage elements.

Cornwall hub leaders' worked in existing networks, together with support systems that included termly visits for beacon schools, produced a number of primary schools that had high investment in LINE. Their emphasis on recruiting strong LINE leads, and then offering them regular, personalised support were contributory factors to this high investment. This hub had three secondary schools, however, of which two were low-investing and the third was a small school, making it easier to coordinate LINE across different departments and year groups. Cornwall had the substantial challenge of dispersed schools, however, making all meetings expensive and time-consuming.

North Somerset hub had a number of schools with low investment in LINE. This hub had a number of challenges: the wide geographic area, which was further expanded to include multiple local authorities that had different educational drivers and approaches; few local networks to draw on; and the (comparatively) small size of the hub leader organisation all contributed to difficulties with school recruitment and engagement. The hub leaders' expertise in Forest School also meant that they had little direct advice for schools that wanted curricular support. However the hub's strategic association with Bristol helped to mitigate the impact of these challenges, and the North Somerset hub leaders' areas of expertise were instrumental in developing a wide range of accessible support for schools. Those schools that had received one-to-one support from the hub leaders were highly appreciative of their efforts.

Plymouth hub leaders had high school recruitment levels and in their exit interview reported that they estimated that one-third were highly engaged with LINE, one-third engaged, and one-third had, for various reasons, reduced their interest in LINE. This view is reflected in the figure above. The Plymouth hub team's enablers were a wide range of strategic and operational expertise to support schools, and an accessible pool of well-connected schools in a small area. They made considerable efforts to achieve project targets, but lacked the capacity to support this large number of schools on the available resources.

Torbay hub's relatively large proportion of schools with low investment can be explained by the slow recruitment strategy of the first hub leader, and the late recruitment of ten schools by the second hub leader, which meant that these schools had only just begun to engage with the project at the time of the July 2015 school survey. The first hub leaders' intensive support for schools that were already engaged with LINE through the LifeLINE CPD network, however, helped to build capacity in beacon schools which provided a strong foundation for the second hub leader to build on; as an experienced, well-known and respected ex-headteacher, this individual was able to engage a wide range of schools and organisations in the last stages of the project.

To sum up, we suggest that the influencing factors on hub models were hub leader capacity, the nature of their expertise, the extent of their networks and their geographical location; all these contributed towards the development of their individual hub model. Hub leaders played a pivotal role in project delivery and all, without exception, worked a substantial number of hours over their funding allocation to establish and develop their Natural Connections hubs. Hub leaders' success can be measured and compared in different ways: the speed with which schools were recruited, the number of schools recruited, schools' subsequent levels of engagement with LINE, schools' participation in the project evaluation and the sustainability of the hub network were all important aspects of project development. All hubs succeeded in these aspects at different levels, and this makes it difficult to pass judgement on hub models in their entirety. In this KEQ we have therefore demonstrated the strengths of and challenges to each model to enable learning points for future delivery.

KEQ 21. What characterised a school most likely to engage with LINE?

Project element and objective	Assumption
Brokerage Support schools in building LINE into their planning and practices	The brokerage element can match schools' ongoing needs with supply, leading to increased LINE activity
KEQ 21. What characterised a school most likely to engage with LINE? **21.1** What were the profiles of project schools? **21.2** What were the characteristics of a school likely to engage with LINE?	
Data sources School profile information, hub leader interviews	

Key points
• The data suggests that Natural Connections schools' structural circumstances were similar to the national picture, and that size of school, percentage of pupils with special educational needs (SEN) and that are eligible for free school meals (FSM) rates, and school Ofsted grade did not make it more or less likely that they would engage with LINE.
• Hub leaders found that schools most likely to engage with LINE had:
   o Senior leadership buy-in
   o Confident, knowledgeable and enthusiastic LINE leadership
   o Open-minded staff
   o More arguably, 'outstanding' or 'good' Ofsted grading, as schools have fewer other challenges to deal with than those in categories three and four.	

Notes Numbers in the graphs vary as data was not available on all themes for all schools	

In this KEQ we first examine the data relating to project schools' profiles, available on the Department of Education's website as public information, to identify any patterns which could demonstrate that particular types of school were likely to engage with LINE. We then draw on the hub leaders' experience of recruiting and working with schools, evidenced by their interview data, to ascertain their views on the characteristics of a school most likely to engage with LINE.

21.1 What were the profiles of project schools?

A total of 125 schools engaged with the project. These included primary, secondary, special and all-through schools, in the proportions shown in Table 21.1 below.

Table 21.1: Project school sectors

	Bristol	Cornwall	North Somerset	Plymouth	Torbay	Total
Primary	19	17	23	28	19	106
Secondary	0	3	3	2	1	9
Special	2	0	1	2	3	8
All-through	1 (4-16 yrs)	0	0	1 (4-16 yrs)	0	2
Total	22	20	27	33	23	125

- **School size**

The national average size of a primary school in 2013/14 was 260 pupils[11], while in the south-west region the average size was 208 in 2014[12]. In Figure 21.1 below we have divided the 106 project primary schools into small (0-149 pupils), medium (150-299 pupils) and large (300+ pupils) sizes. Figure 21.1 shows that 38 per cent of project schools were medium-sized; that is, close to the average size of school in the south-west. Bristol (52 per cent) and Torbay (57 per cent) had the highest proportion of large schools; the other geographically small hub of Plymouth had the highest proportion of medium-sized schools (54 per cent). Cornwall, the most rural hub, had the highest proportion of schools with 299 pupils or fewer (88 per cent). The other rural hub, North Somerset, had 61 per cent of schools with 299 pupils or fewer.
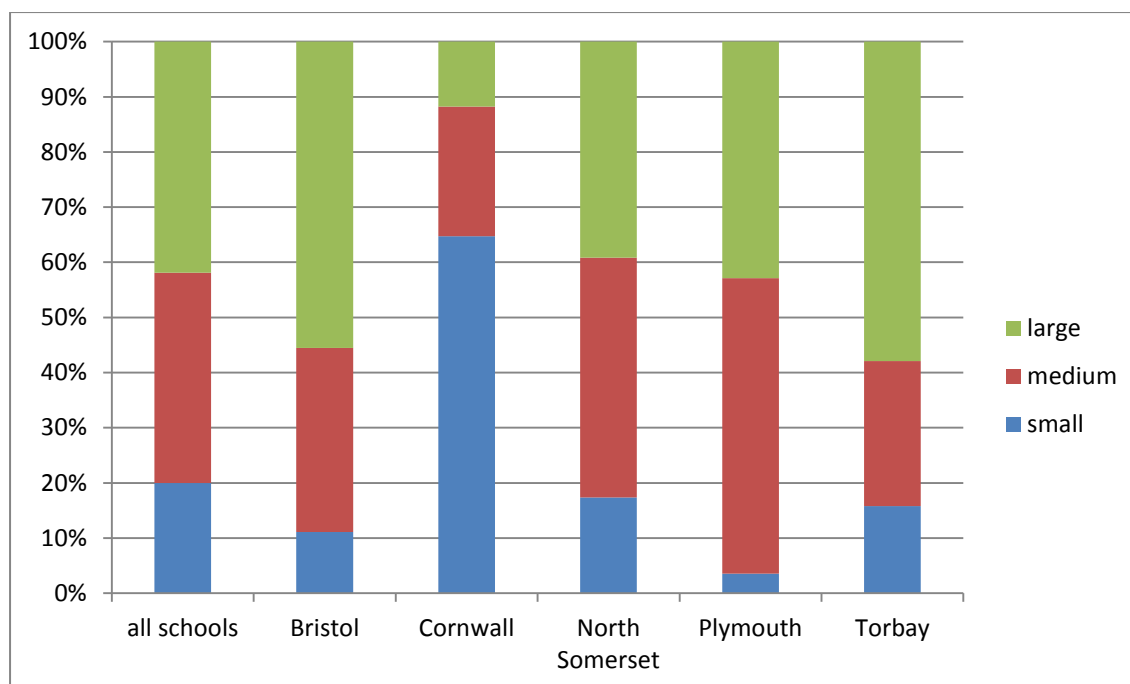
n=106: Bristol n=19, Cornwall n=17, North Somerset n=23, Plymouth n=28, Torbay n=19
Note: no data available for one Bristol school.
Figure 21.1: Project and hub-level project primary school size

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[11] Parliament research briefings (2015) *Schools and class sizes*, researchbriefings.files.parliament.uk/documents/SN02625/SN02625.pdf.
[12] Learning Plus UK (n/d) *Primary school sizes: 2007-2014*, http://learningplusuk.org/blog/2015-07-10/primary-school-sizes-2007-2014.

The average size of secondary school in the UK was 956 in the academic year 2013/14[13], and the nine project secondary schools ranged in size from 614 to 1402 pupils. The average number of pupils per special school in the UK was 101 in January 2015[14], and the eight project special schools ranged in size from 50 to 203 pupils. There were two project all-through schools. We have not reported their data in this KEQ to avoid the schools' identification.

- **Special Educational Needs (SEN)**

Figure 21.2 below shows the project primary school average percentage of pupils with an SEN statement or on School Action Plus. These figures were taken from school profile data in the DfE 2015 school performance tables[15]. The publicly-available school information did not reflect the ongoing introduction of Education, Health and Care plans from September 2014[16]. The national average percentage of all school pupils with SEN in January 2014 was 17.9[17] and fell to 15.4 per cent in January 2015[18]. In January 2015, between 5–25 per cent of pupils accessed SEN support in 86 per cent of primary schools in England; in the south-west, between 5–25 per cent of pupils accessed SEN support in 87 per cent of primary schools[19]. Figure 21.2 shows that project schools' average percentage of pupils accessing SEN support ranged between eight and 11 per cent, which falls at the lower end within the 5-25 per cent of SEN pupils seen in the majority of schools both nationally and regionally.

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[13] Parliament research briefings (2015) *Schools and class sizes*, researchbriefings.files.parliament.uk/documents/SN02625/SN02625.pdf.

[14] Department for Education (2015) *Statistical First Release 25/2015: Special educational needs in England, January 2015 – contents: Tables 10A and 10B,* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446718/SFR25-2015_TABLES_NATIONAL.xlsx.

[15] Department for Education performance tables (2015) http://www.education.gov.uk/schools/performance/index.html accessed 9/11/2015.

[16] Department for Education (2015) *Educational Health and Care Plans*, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/346221/Education_health_and_care_plans.pdf.

[17] Department for Education (2014) *Statistical First Release: Special Educational Needs in England: January 2014* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/362704/SFR26-2014_SEN_06102014.pdf.

[18] Department for Education (2015) *Special educational needs: an analysis and summary of data sources,* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/472575/Special_educational_needs-_an_analysis_and_summary_of_data_sources.pdf.

[19] National Statistics (2015) *Special educational needs in England: January 2015. National tables: SFR25/2015*, Table 2a, https://www.gov.uk/government/statistics/special-educational-needs-in-england-january-2015.
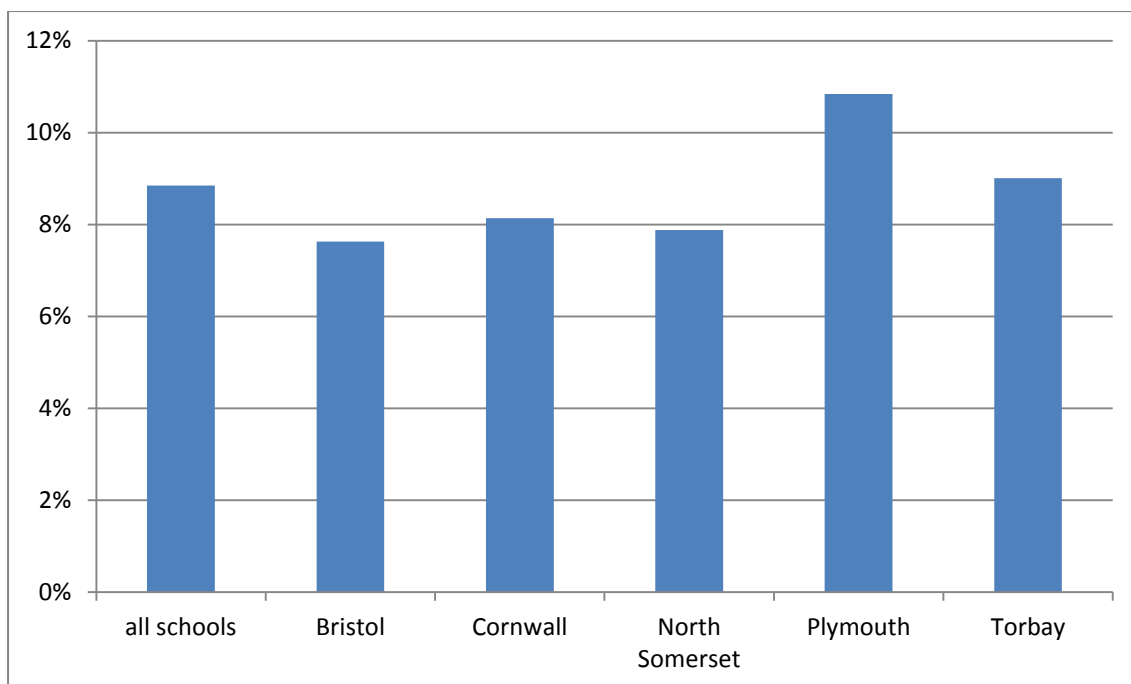
n=103: Bristol n=18, Cornwall n=17, North Somerset n=23, Plymouth n=27, Torbay n=18.

Figure 21.2: Project and hub-level primary school average percentage of pupils with SEN statement or on School Action Plus

- **Free school meals (FSM)**

In January 2014, 16.3 per cent of pupils in English maintained schools were eligible for FSM, a proxy measure for poverty, a figure that decreased to 15.2 per cent in January 2015. For primary and nursery school pupils the respective percentages for 2014 and 2015 were 17 and 15.6; in secondary schools the percentages were 14.6 and 13.9; and in special schools they were 37.2 and 37.4[20]. Figure 21.3 below shows the wide range in terms of the percentage of children eligible for FSM in project primary schools (n=104), with little discernible pattern. Fifteen schools match the national picture of between 15.2 – 16.3 per cent of children eligible for FSM; 53 schools have percentages below and 36 schools have percentages above this national picture.

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[20] Department for Education (2015) *Statistical First Release: Schools, pupils and their characteristics: January 2015*, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/433680/SFR16_2015_Main_Text.pdf.
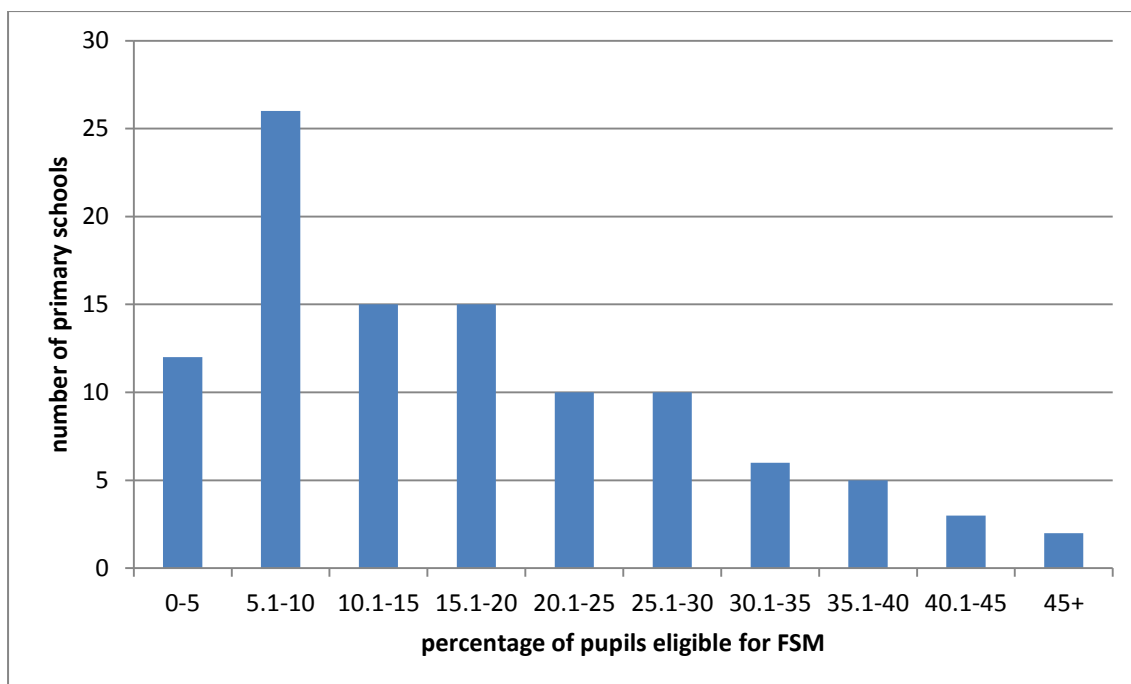
Figure 21.3: Percentage of children eligible for FSM in project primary schools[21]

The nine project secondary schools ranged in percentage of pupils eligible for FSM from 3.7 to 33 per cent, and the eight project special schools ranged in per cent of pupils eligible for FSM from 28.9 to 64 per cent. These, again, show a wide range of pupils eligible for FSM.

- **Ofsted grading**

Figure 21.4 below shows that across the project:

- o 16 per cent of project primary schools were rated as 1 (outstanding) by Ofsted, compared to 18 per cent nationally.
- o 68 per cent of project primary schools were rated as 2 (good), the same as the national figure of 68 per cent.
- o 12 per cent of project primary schools were rated as 3 (requires improvement), compared to 13 per cent nationally
- o 3 percent of project primary schools were rated as 4 (inadequate), compared to 1 per cent nationally.

Due to the small numbers of secondary and special schools a comparison cannot be made between the project schools and the national data. All the project special schools were in category 1 and 2; all but one of the secondary schools were in category 1 and 2, and the remaining school was in category 4.

The data above would suggest that Natural Connections schools' structural circumstances were similar to the national picture, and that size, SEN and FSM rates and Ofsted grade did not make it more or less likely that they would engage with LINE.

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[21] Source: DfE performance tables 2015, http://www.education.gov.uk/schools/performance/index.html (accessed 9/11/2015).
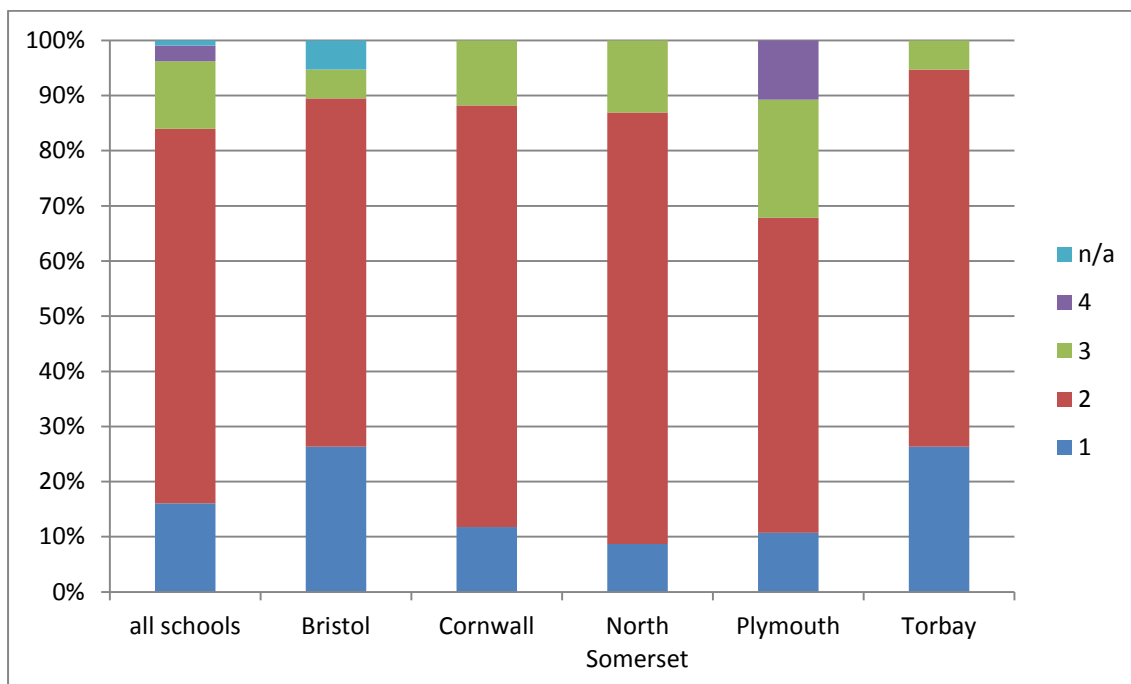
n=106: Bristol n=19, Cornwall n=17, North Somerset n=23, Plymouth n=28, Torbay n=29

Figure 21.4: Percentage of schools by hub and Ofsted grading[22]

21.2 What were the characteristics of a school likely to engage with LINE?

In this section we draw on hub leaders' experiences of recruiting and engaging schools with LINE to describe the factors that made it likely that a school would engage with LINE. Hub leaders were unanimous about the three factors of senior leadership buy-in, staff commitment and open-minded staff, and three believed that Ofsted grading was a factor.

- **Senior leadership buy-in**

All hub leaders agreed that senior leadership buy-in to the concept and practical use of LINE was essential, and two included explicit confirmation of this in their recruitment strategies (see KEQ 3). One hub leader summed up an ideal situation in which there was whole-school buy-in to LINE through strong leadership:

   o [engaging schools successfully with LINE] *'is ensuring school leaders are fully onside … where the school leadership has that philosophy, and can see how LINE can fit within it and actually augment it'.*

One hub leader described how this leadership buy-in was critical to a process in which LINE could become embedded in a school's policy and practice. Again this was an ideal situation, but one in which leadership support meant that the school could develop a culture that embraced LINE. The process was described as follows:

   o Teachers would be given time and resources to engage with LINE

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[22] Sources: Project school data: http://reports.ofsted.gov.uk - accessed 9/11/15; National data: http://www.watchsted.com (based on 16093 primary and 3125 secondary schools), accessed 22/12/15.

- Teachers would be given the space in which to experiment with new ideas and approaches
- Physical space for LINE could be developed and/or local green spaces discovered and used
- Senior leadership buy-in would increase as the positive impact of LINE became apparent
- LINE would become part of the school development plan
- An expectation of LINE lessons would be developed across the school
- LINE would become part of the interview process for new leadership positions, thereby signifying that LINE was an integral part of the school's practice and culture.

Hub leaders commented that achieving this leadership buy-in was more difficult in secondary schools that were larger and more fragmented; one commented that they had been approached by a few secondary schools during the project but that *'the stumbling block'* had been the absence of headteacher support and the schools had not joined the project.

Finally, hub leaders argued that the quality of leadership was important. One hub leader spoke of how a school had been particularly successful in developing LINE practice first, because of the quality of the headteacher's leadership and secondly, because LINE was an integral part of his educational philosophy:

- *'The head has been there a long time … so he has established relationships. He's given clear leadership … and he's developed a philosophy in the school that everybody buys into. And they do; it's incredible. You just talk to staff and they get it, they really do buy into it. And … that leadership is so important'.*

Conversely, the *'least successful'* school in the same hub in terms of engaging with LINE was one where senior leadership engagement was *'absolutely non-existent'* and the school subsequently left the project.

- **LINE leadership**

Hub leaders were also unanimous in the need for knowledgeable and enthusiastic LINE leads within schools. Although some hub leaders commented that the LINE leads were more effective when they had status within the schools, others reported that it was important that the LINE leads should have sufficient confidence, knowledge and personality to be able to promote LINE in their school. This highlighted the need for leadership training opportunities for LINE leads during the project to support their development as leaders. The key, as the following quotation shows, was *'identifying the right leaders and advocates'* to lead LINE, a point of agreement by all hub leaders:

- [Some LINE leads] *were relatively junior members of staff, and the experience of this has shown that there is no substitute for initiative, determination and enthusiasm for persuasiveness … These are the*

key characteristics I think of, apart from knowing about outdoor learning, which is a given … Some of these [LINE leads] *are very junior staff who go into staffrooms of… over 100 people and* [they have] *the confidence and the wherewithal to put the message across in an acceptable way and bring people on board. And to get people to come to them and say, 'I'm thinking of doing this' … It is all about people, it's about people, getting the right people'.*

- **Open-minded staff**

All hub leaders spoke of the critical importance of what one termed *'fertile soil'*, in which school leaders and staff were open-minded in their approach and were prepared to experiment with LINE (see KEQ 27). All hub leaders offered examples of schools where staff had been resistant to LINE (in one case despite an enthusiastic headteacher) and activity had foundered, and of schools in which staff had shown an initial open-mindedness and then continued to embrace LINE as its benefits became apparent. It was at this stage that stability and continuity of staff were seen as important; hub leaders reported that turnover in school staff was a factor that could destabilise the way a school was embracing and embedding LINE, and all provided examples of when LINE development had reduced and/or been delayed through new appointments. A change of staff could be particularly significant if it involved senior leaders and/or the LINE lead, either in promoting or demoting LINE as part of the school's activity.

- **Ofsted grading**

During the recruitment process, three hub leaders spoke of the difficulty of engaging schools that were in Ofsted categories 3 and 4 (i.e. 'requiring improvement' and 'indequate'), principally because schools in such circumstances tended to be under intense scrutiny and school leaders would therefore be unlikely to experiment with a new approach. These hub leaders believed that schools that had high Ofsted grades of 'outstanding' and 'good' would have *'more freedom in their practice'* and would therefore be more likely to engage with LINE. The fact that only four schools 'in special measures' and ten schools 'requiring improvement' engaged with the project suggests that Ofsted grading may be a factor in engaging schools with LINE. However the presence of these 14 schools in the project may also suggest that the previous three staff-related factors had more influence on their willingness and capacity to be engaged with LINE.

KEQ 22. How well were school CPD demands met?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can match schools' ongoing needs with supply, leading to increased LINE activity
KEQ 22. How well were school CPD demands met? **22.1** Did schools undertake LINE-related CPD? **22.2** Were schools' CPD needs met? **22.3** Why were schools CPD needs not met?	
Data sources School baseline survey, July 2014 school survey, July 2015 school survey	
Key points • The proportion of schools that reported engagement with CPD rose from 55 to 67 per cent, a statistically significant increase (p-value=0.05). • Across the project, 70 per cent of schools that accessed LINE-related CPD reported that their CPD needs had been met. • Time is the key factor that prevents staff from undertaking CPD.	
NOTES See KEQ 14 for hub leader strategies for developing CPD; KEQ 29 for a full discussion on the role of CPD in the project. Quotations from the surveys are 'in inverted commas'	

22.1 Did schools undertake LINE-related CPD?
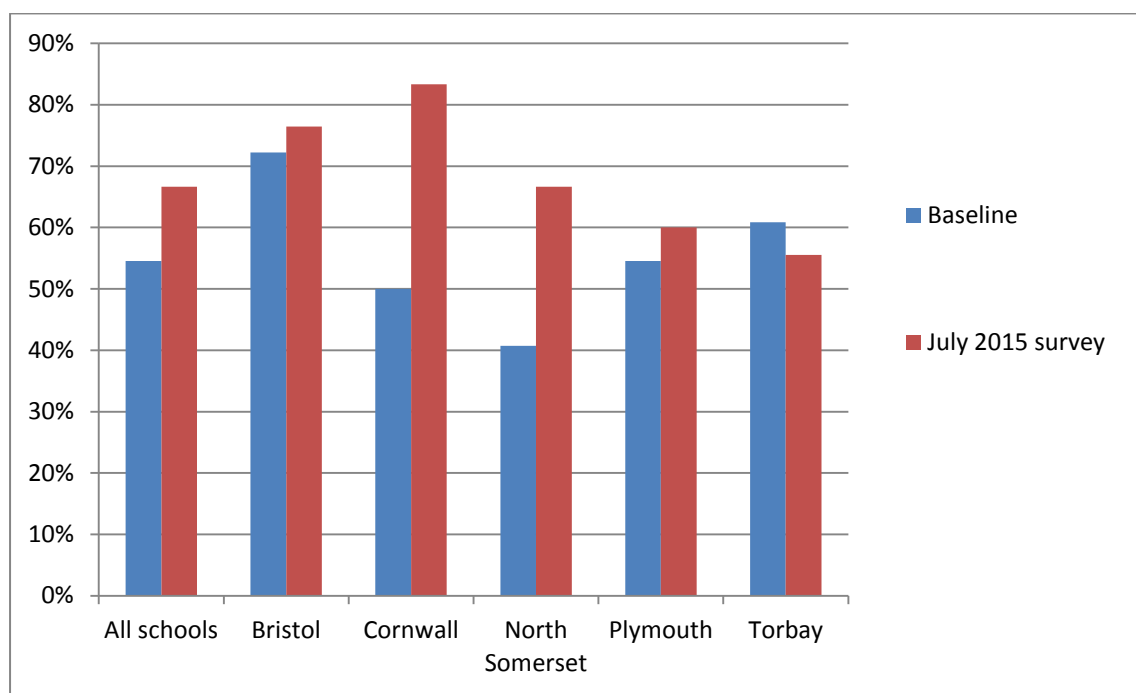
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 school survey n=87: Bristol n=17, Cornwall n=12, North Somerset n=15, Plymouth n=25, Torbay n=18
Figure 22.1: Project and hub-level school CPD activity

Figure 22.1 above shows that, across the project, the proportion of schools that reported engagement with CPD rose from 55 to 67 per cent, a statistically significant increase (p-value=0.05).

Within the hubs, activity increased in all hubs except Torbay, in which the percentage of schools that reported engaging with CPD decreased from 61 to 56. This may partly have been due to changes in hub leader approach: the first Torbay hub leaders invested heavily in CPD with a small number of beacon schools; the second hub leader recruited ten schools between November 2014 and March 2015 and it is likely that these schools had little time in which to become involved with CPD activity before completing the July 2015 school survey.

Schools that reported the largest increase in CPD activity came from Cornwall (50 to 83 per cent) and North Somerset (41 to 67 per cent). Both these areas are geographically large with limited existing support networks for schools available from local authorities. There was relatively little change recorded in schools from Plymouth and Bristol, although Bristol schools reported higher levels of LINE CPD activity in the baseline survey than the other hubs.

The (few) survey comments in the baseline survey that related to CPD showed schools' expectations for both formal training and informal support:
- 'Much interest from TAs in LINE. LINE is incredibly important & personally seen great effects on children which makes me more enthusiastic & would like to be doing more

of it. Hoping the project will keep us focused as a school and moving forward to more LINE & staff across the board being more confident in LINE. Planning to put in veg bed for each class & so staff will need to be trained in this & is a major need'.

- 'Very excited about the project and looking forward to being able to make connections with other providers and schools'.

As the project progressed, schools from all five hubs showed an increasing appreciation for the informal support provided by network meetings and inter-school collaborations. Examples of comments from the July 2014 school survey included:

- 'It is very helpful in collaborating with others and drawing together all the different organisations available locally. It has given a unifying name to an area of learning that was using different names before' (Bristol).
- 'Provides a stimulus for LINE activity and opportunity to share good practice and ideas' (Cornwall).
- 'We have found the LINE project has provided a networking opportunity' (North Somerset).
- 'Other schools to link with and go to for support' (Plymouth).
- 'This provides very beneficial support and access to resources and ideas. It has been really useful to visit other schools and meet with other teachers to discuss plans and projects' (Torbay).

Findings from this survey have not been included in the figures above and below because of the small total number of respondents (28).

Comments from the July 2015 school survey showed a similar appreciation of this type of support, with more references to informal support offered through networking and collaboration than formal (i.e. organised training sessions) CPD. Two quotations illustrate these points:

- 'Networking opportunities, access to CPD, inspiration' (Bristol).
- 'We have really valued the Natural Connections cluster sessions - thank you! They are inspiring with new ideas! A great group to be a part of. I like the strong collaboration and support with other local schools - it helps to make LINE happen!' (North Somerset).

These references to 'CPD' and 'networking' suggest that schools did not necessarily regard the informal CPD provided by network meetings or inter-school activities as 'CPD', and that schools may therefore have under-estimated the amount of LINE-related CPD that they undertook during the course of the project.

22.2 Were schools' CPD needs met?

Figure 22.2 below shows schools' views on whether their LINE-related CPD needs had been met during the project, taken from the July 2015 school survey. The highest percentage of schools that reported their CPD needs had been met came from Plymouth schools (64 per cent) and the lowest came from Torbay (39 per cent). 60 per cent of North Somerset schools reported that their needs had been met, Cornwall 50 per cent and Bristol 47 percent.
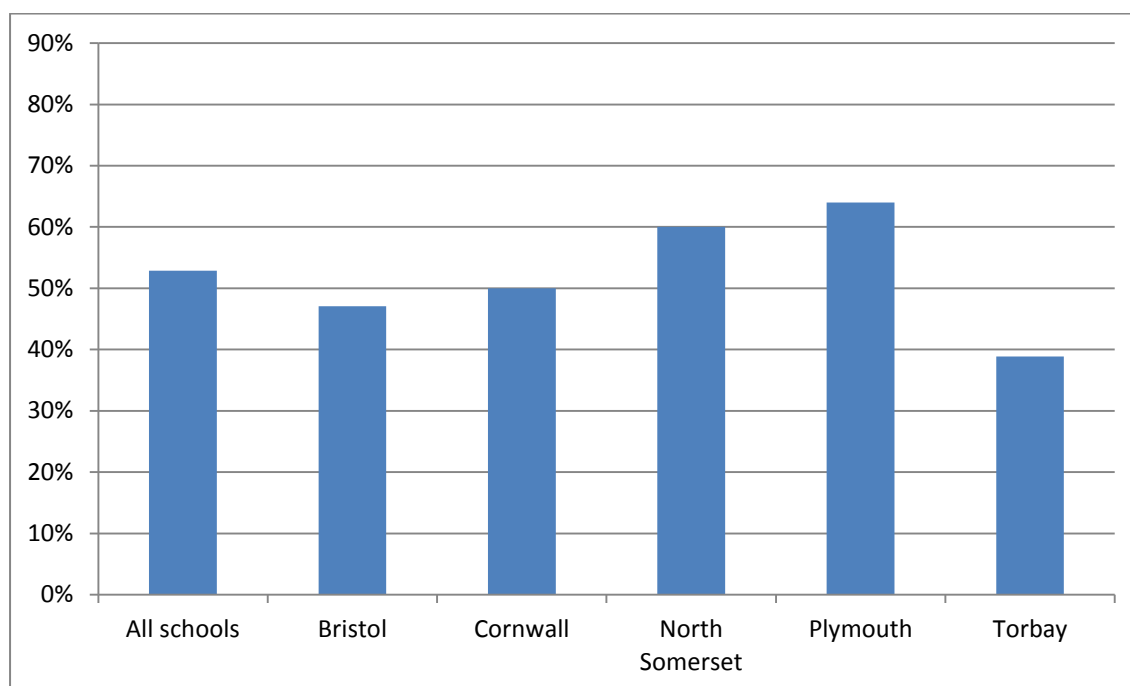
July 2015 school survey n=87: Bristol n=17, Cornwall n=12, North Somerset n=15, Plymouth n=25, Torbay n=18
Figure 22.2: Project- and hub-level schools' views on whether their CPD needs had been met (all schools: July 2015 school survey)

Figure 22.3 below shows the findings from the 66 schools that reported undertaking CPD in the period between completing their last survey and July 2015. The figure demonstrates that, across the project, 70 per cent of these schools reported that their CPD needs had been met. At least 50 per cent of responding schools from each hub reported that their CPD needs had been met, and the highest levels of satisfaction were reported by Plymouth (89 per cent) and North Somerset (82 per cent). This suggests that schools that accessed LINE-related CPD were generally satisfied with the offer, and raises the question of why schools did not attend the CPD organised within their hub. This is the subject of the next section.
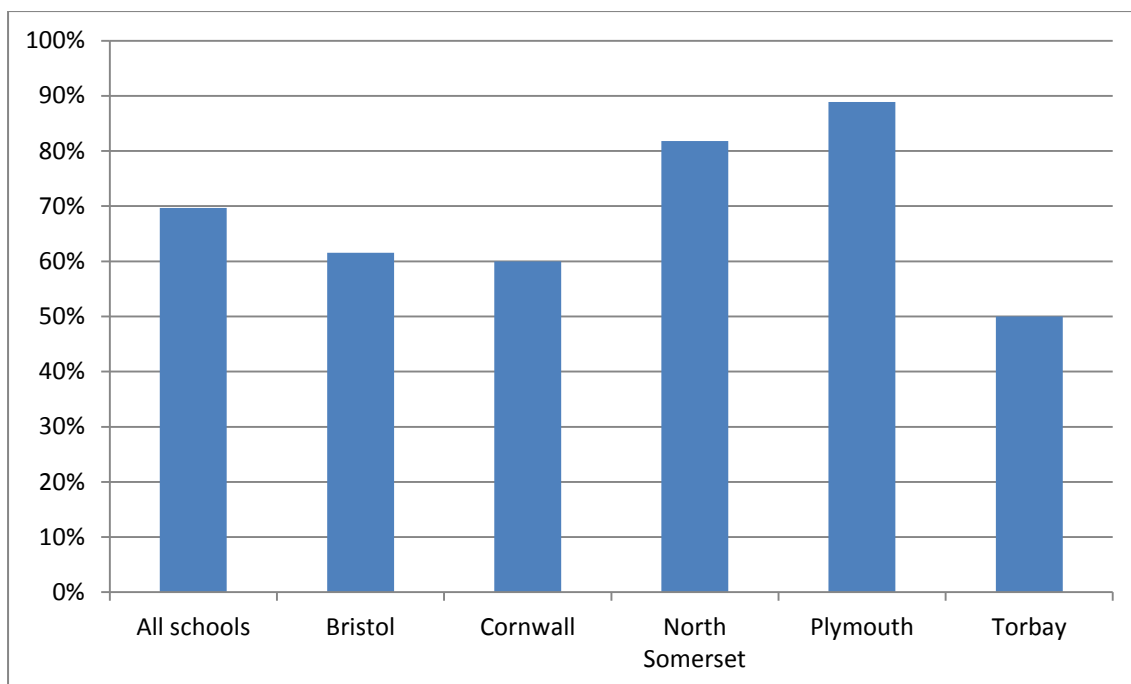
Figure 22.3: Project- and hub-level schools' views on whether their CPD needs had been met (schools that reported undertaking CPD: July 2015)

22.3 Why were schools' CPD needs not met?

Of the 87 schools that responded to the survey, 39 reported why their CPD needs had not been met, shown in Figure 22.4 below. Time was the most frequently reported reason (62 per cent of schools who reported a reason); inability to find the CPD needed was reported by 23 per cent; and expense by 21 per cent of schools. There do not appear to be any consistent patterns between hubs. The sample sizes for individual hubs are small, so these findings should be treated with caution.

The reference to 'time' covers a number of factors that can include competing school priorities, therefore leaving no time for LINE, and time to engage with staff within the school (see KEQ 23 for challenges to LINE). Three survey comments alluded to the pressures of time within schools, and illustrate the general challenge of finding the temporal space necessary to engage with and embed LINE in busy schools:

- The project 'is supportive with signposting and information on curriculum and LINE providers. It does not solve the common problems faced by a LINE facilitator in a school under pressure to raise standards' (July 2014 school survey).
- The project 'has enabled me to connect with other like-minded teachers who have a vision of what education should be like but also have the very real pressures of the rest of life in a busy school which hinder what can be done about it' (July 2015 school survey).
- 'Natural Connections helps support the value and provide more purpose [to LINE] but doesn't make it happen' (July 2015 school survey).
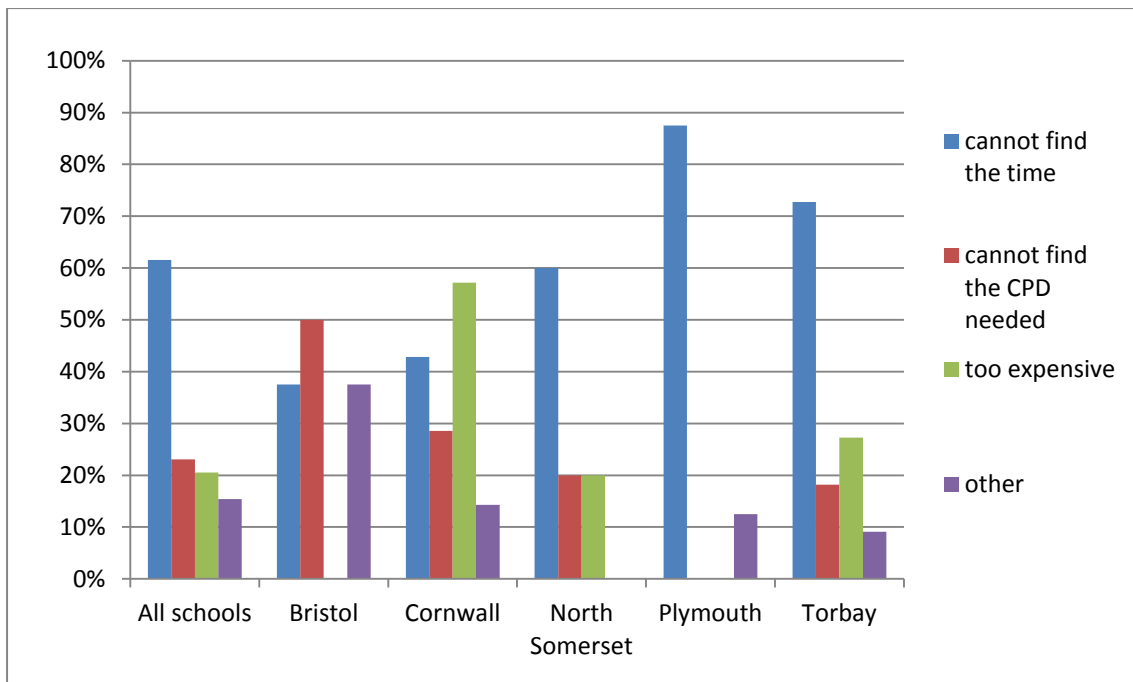
July 2015 school survey n=39. Bristol n=8, Cornwall n=7, North Somerset n=5, Plymouth n=8, Torbay n=11

Figure 22.4: Project and hub level reasons why CPD needs have not been met (July 2015)

KEQ 23. What were the real and perceived challenges to LINE in schools? Were there any patterns within or across hubs?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can help schools overcome real and perceived challenges to engaging with LINE

KEQ 23. What were the real and perceived challenges to LINE in schools? Were there any patterns within or across hubs?
23.1 What were the challenges to LINE reported by schools in the surveys?   **23.2** What were the challenges reported by hub leaders?   **23.3** What were the challenges to LINE reported in school case-study visits?
Data sources   School baseline survey, July 2014 school survey, July 2015 school survey, 'Time for LINE' school survey, hub leader interviews, school case studies.

Key points
 • The average number of challenges reported in each hub decreased between the baseline and July 2015 school surveys.
 • Challenges reported consistently by schools and hub leaders included:
    o **time** to understand, promote and develop confidence and professional practice in LINE. This was often difficult because of perceived competing school priorities.
    o **funding** for staff continuing professional development (CPD), grounds development, clothing and equipment.
    o **confidence** in LINE as an effective learning approach; in the support of senior leadership for staff to practise LINE; in teachers' own professional LINE practice; and in staff capacity/ability to support LINE in other schools.
 • These challenges were not universal, however, and the range of challenges cited by project participants can be summed up as an overarching challenge of culture change; it takes time and investment of goodwill, energy and funding to make LINE happen and sustain it.

NOTES   Direct quotations from hub leader and school case-study interviews *'are in italics and inverted commas'*

23.1 What were the challenges to LINE reported by schools in the surveys?

Figure 23.1 below shows the challenges to LINE that were reported by all schools in the baseline, July 2014 and July 2015 school surveys. Each time, schools were asked to select up to five main challenges their school had experienced that had prevented or restricted learning in the natural environment. This is a complex picture that is summarised in Figure 23.3.

The average number of challenges reported in each hub fell between the baseline and July 2015 school surveys. Across the project this figure fell from 3.8 challenges reported per school in the baseline to 3.3 in the July 2015 school survey, indicating an overall reduction in the challenges schools faced in engaging with LINE.
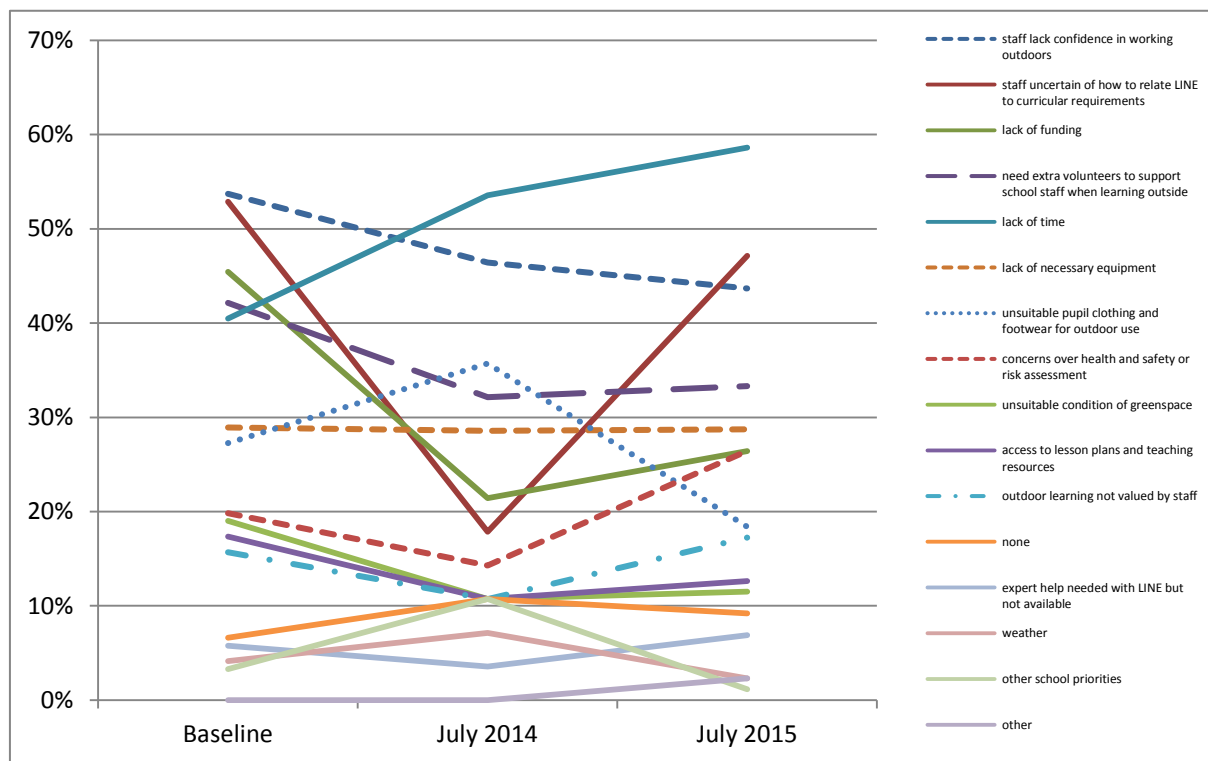
Baseline n=121; July 2014 survey n=28; July 2015 school survey n=87
Figure 23.1: Project-level schools' challenges to LINE

Figure 23.1 shows some clear patterns:

- Time increased as a challenge over the project lifetime: 40 per cent of responding schools reported time as a challenge in the baseline survey, 54 per cent in the July 2014 survey and 59 per cent in the July 2015 school survey.
- Uncertainty around linking LINE to the curriculum decreased rapidly as a challenge from the baseline survey (53 per cent of responding schools) to July 2014 (18 per cent), and then rose in the July 2015 school survey to 47 per cent. This was possibly related to the introduction of the new national curriculum in September 2014.
- Staff confidence in working outside decreased as a challenge over the project lifetime (54 per cent baseline; 46 per cent July 2014; 44 per cent July 2015), suggesting that the informal and formal CPD brokered within the project was having a positive effect.
- Lack of funding decreased as a challenge from the baseline (45 per cent) and remained a low level thereafter (21 per cent July 2014; 26 per cent July 2015) (see KEQ 5 for school investment in LINE; KEQ 14 for school payment for LINE).
- Challenges around health and safety (20 per cent baseline; 14 per cent July 2014: 26 per cent July 2015) and staff valuing outdoor learning (16 per cent baseline; 11 per

343

cent July 2014; 17 per cent July 2015) increased slightly over the project lifetime, although from a low base.

Figure 23.2 below shows the challenges reported by the 22 schools which completed all three of the baseline, July 2014 and July 2015 school surveys.
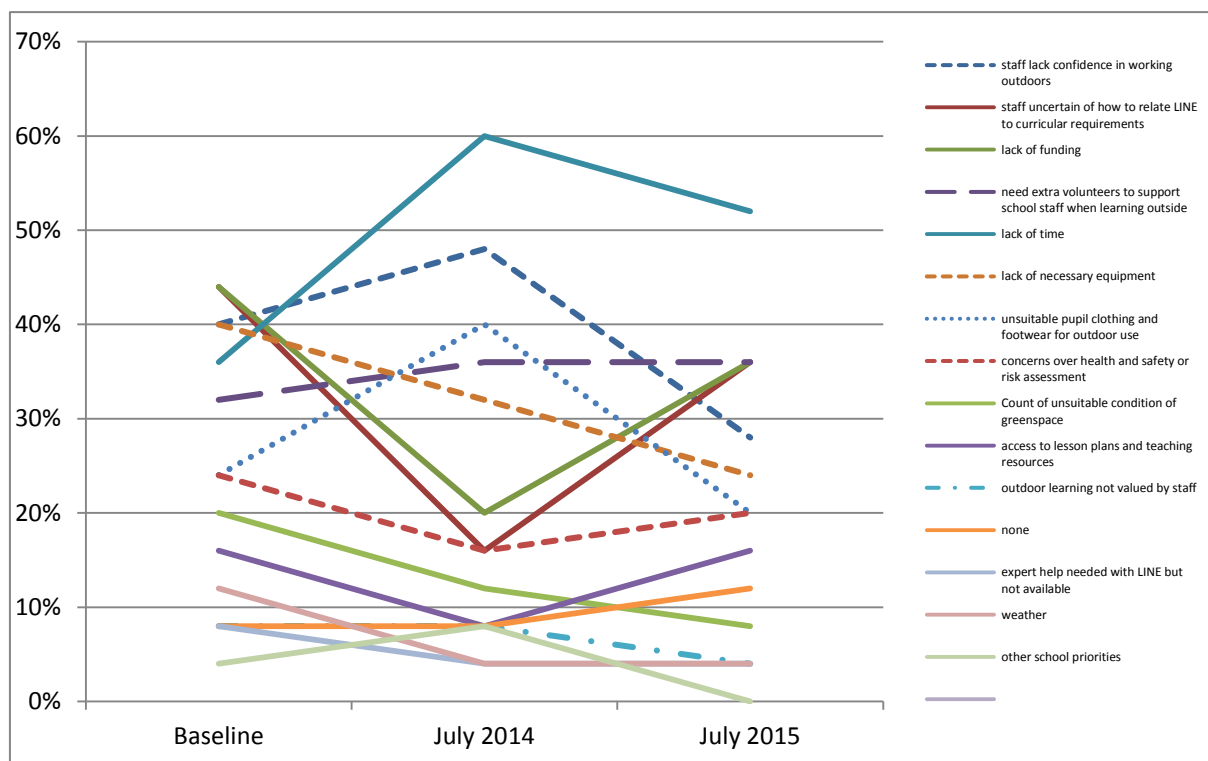
All surveys n=22

Figure 23.2: Challenges to LINE reported by the 22 schools that completed all surveys

The patterns vary slightly from Figure 23.1, possibly because these responding schools were likely to be more engaged and active in LINE, evidenced by their willingness to engage with the research. Relevant points to note include:

- Although schools reported that the challenge of time increased initially (36 per cent baseline, 60 per cent July 2014), it then decreased to 52 per cent. This suggests that after an initial investment of time and energy, schools start to become 'set up' for LINE. A decrease in the challenges of the lack of necessary equipment (40 per cent baseline; 32 per cent July 2014; 24 per cent July 2015), unsuitable condition of the green space (20, 12 and 8 per cent respectively), and weather (12, 4 and 4 per cent respectively) help to confirm this interpretation.
- Staff lack of confidence in working outdoors in these schools decreased substantially over the project lifetime (40 per cent baseline; 48 per cent July 2014; 28 per cent July 2015), again suggesting that those schools that accessed CPD and/or attended informal CPD within the hub grew in knowledge and expertise.
- As was the case with the whole-school survey responses, uncertainty around linking LINE to the curriculum among the 22 schools decreased as a challenge between the baseline (44 per cent) and the July 2014 surveys (16 per cent), and then rose in the

July 2015 school survey to a percentage of 36 per cent; this percentage was 47 in Figure 23.1 This reinforces the suggestions that first, the increase in uncertainty was related to the introduction of the new national curriculum and secondly, that these 22 schools were more engaged and active in their LINE practices.

Figure 23.3 below shows those challenges reported by at least 30 per cent of responding schools in either the baseline or July 2015 school surveys.
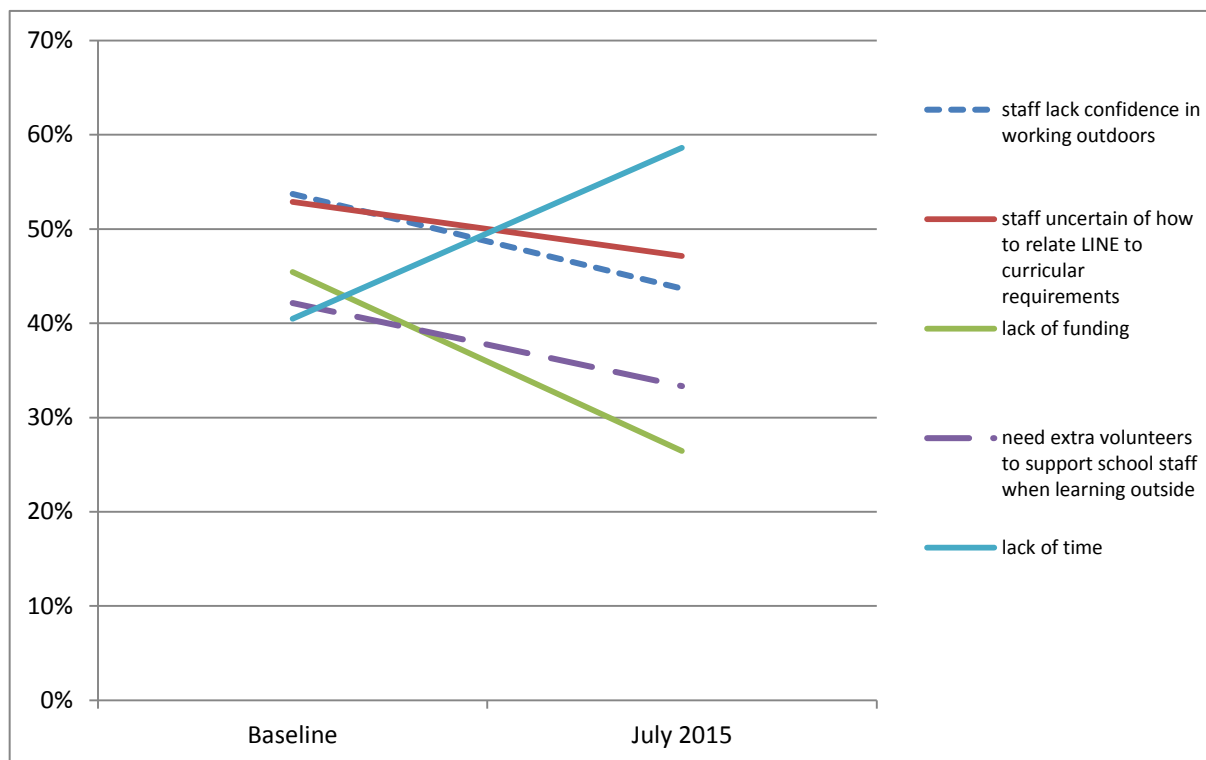
Baseline n=121, July 2015 school survey n=85.
Figure 23.3: Selected school challenges to LINE

Figure 23.3 shows a pattern in which the four challenges of staff lacking confidence in working outside, staff uncertainty about linking LINE to the curriculum, lack of funding, and need for volunteers reduced over the project lifetime. Under 50 per cent of responding schools reported these four challenges in July 2015, which again suggests that schools were beginning to understand how reasonably low-cost LINE could be used to support school priorities and to take measures to embed it into regular LINE activities.

In all the hubs the challenges of: staff lacking confidence in working outdoors; staff uncertainty of how to relate LINE to curricular requirements; lack of funding; the need for volunteers to support LINE and; lack of time were reported over 30 per cent of schools in either the baseline or July 2015 school surveys. The additional challenges reported by more than 30per cent of schools in either survey:

- in Bristol were lack of necessary equipment and concerns over health and safety and risk assessment;
- in Cornwall were lack of necessary equipment and outdoor learning not valued by staff;

- in North Somerset were lack of necessary equipment and unsuitable clothing and footwear for outdoor use;
- in Plymouth were unsuitable clothing and footwear for outdoor use
- in Torbay were concerns over health and safety or risk assessment and access to lesson plans and teaching resources.

These challenges that were reported in hubs above the 30 per cent rate but not common to all hubs suggest that, although there are a set of common 'main' challenges that schools face, there are local circumstances, factors or cultures that can influence the way schools see and approach LINE.

The only challenge that schools reported as increasing was that of time (from 40 to 59 per cent). In response to these emerging survey findings, we distributed a 'time for LINE' survey in May 2015. We asked schools to rate different pressures on time, identified in our interviews with schools and hub leaders, from 'very unimportant' to 'very important'. 50 schools responded. Figure 23.4 below shows the results of this survey.
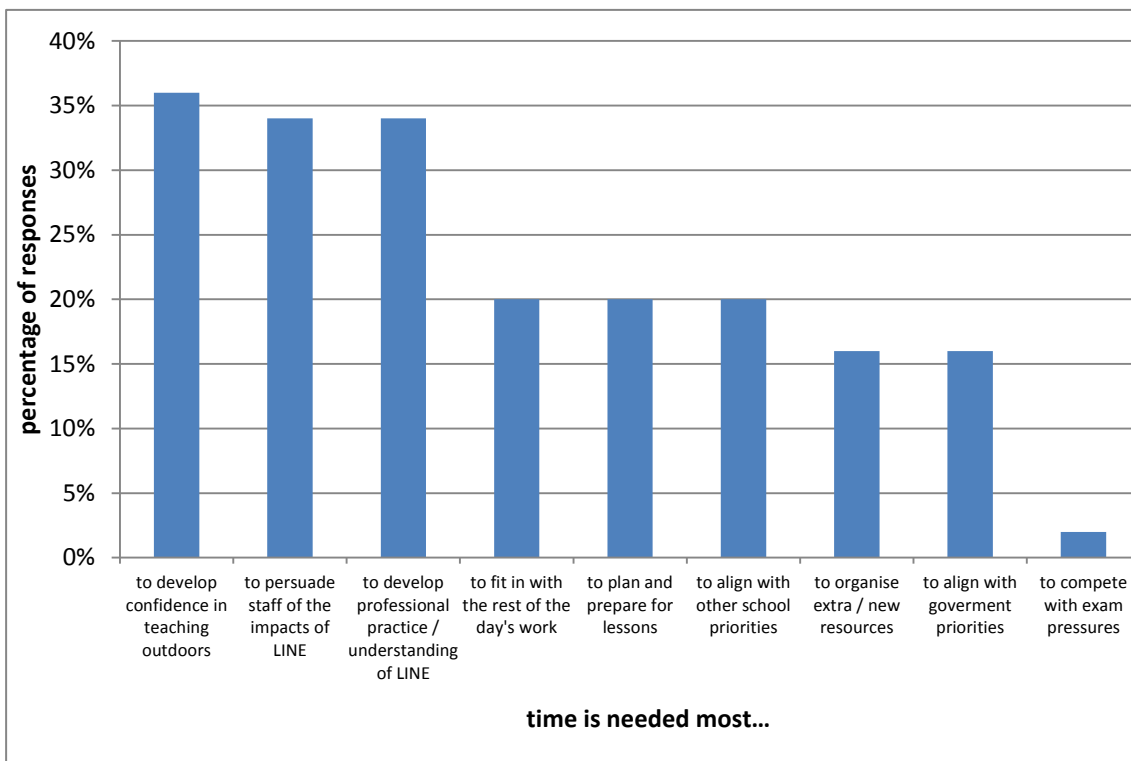
n=50

Figure 23.4: School 'Time for LINE' survey

The survey shows that the three most frequent responses from schools were that they needed time for:
- Developing staff confidence in teaching outdoors (36 per cent of responding schools)
- Developing professional practice (34 per cent)
- Communicating the benefits of LINE (34 per cent).

The wide range of responses emphasises the individual nature of schools' challenges to LINE.

In the following sections we draw on hub leader and case-study data to examine the challenges to LINE in more detail.

23.2 What were the challenges to LINE reported by hub leaders?

All hub leaders confirmed that time was the most significant challenge to LINE, but they linked this challenge to schools' competing priorities and senior leadership support. Specific challenges reported by hub leaders that related to time, and that reflected the three most important issues reported by schools in the above survey, were:

- time for LINE leads **to promote** LINE within the school. LINE leads needed to be given sufficient time to be able to demonstrate to staff that LINE was an effective teaching approach. One hub leader commented that *'countering apathy'* was a particular challenge to LINE, while others spoke of *'resistance'* to LINE; all agreed that *'selling the value of it to teachers across the curriculum'* took time.
- time for the wider staff **to understand the value** of LINE. As an example, Bristol hub leaders reported that one project school had also been involved with another project, and commented that *'It has taken a year for people to realise, for senior leadership to realise that actually what they* [teachers] *are doing is enhancing the* [pupil] *learning and the engagement'.* Another remarked that: *'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'.*
- time for all staff **to engage with LINE in teaching practice**. This meant that teachers needed time to attend both formal and informal CPD sessions to develop knowledge and expertise, and time to experiment with LINE in their practice. One hub leader commented that *'a very deep-seated worry'* in this context was that schools were often *'driven by performance managers in schools and Ofsted from the outside.* T*he worry is around the need to do everything quickly, allowing limited time for reflection and development of teaching practice'.*
- time **to support staff in other schools**. Natural Connections was a project that aimed to develop clusters of mutually supportive schools, led in the first instance by beacon schools; allowing LINE leads within schools time to develop confidence and then to undertake outreach work was critical to its success.

Underpinning schools' capacity to offer their staff time to engage with LINE was the attitude of senior leadership towards the competing agendas of, for example, academy conversion, management issues, headteacher recruitment, Ofsted inspections and poor attainment. Hub leaders reported that any of these could cause school staff to *'narrow in again'* rather than open their practice to the possibilities of LINE. If school leaders understood the value of

LINE and were prepared to support it, time became less of an issue – although hub leaders consistently commented that schools were *'always reporting that there are so many other things going on'*, and that schools needed *'the headspace to fit it* [LINE] *in to everything else'*. Hub leaders also reported that, as schools developed their LINE practice, so they understood better how to prepare, plan and run LINE sessions, which meant that LINE required less staff time. This type of development is reflected in Figure 23.2 above.

Other challenges cited by hub leaders were:
- 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'*.
- Lack of capacity in small schools. This was particularly applicable in Cornwall which has a high percentage of small schools. A small number of staff (often part-time) in small schools could have a negative effect on staff capacity, not only to support other schools but also to advocate and support LINE within their own.
- Hub leaders reported that staff turnover, illness, or role change could present a challenge to the development of LINE activities, particularly when this involved a key member of staff. All hub leaders provided examples of LINE activities stalling in schools that had undergone this type of change.
- The new curriculum, introduced in 2014. Hub leaders reported that some schools (temporarily) halted their LINE activity, while others used it as an opportunity to engage more deeply with LINE.
- Three hub leaders reported that funding LINE was a challenge for schools. This related to developing school grounds, purchasing equipment, CPD and providing supply cover for teacher absence when attending/presenting CPD.
- Health and safety requirements. These were reported as both *'a real fear'* and as an issue that *'teachers may sometimes hide behind'* as a reason to avoid teaching outside.
- Poor school grounds. All hub leaders reported that schools undertook grounds improvement. Other challenges related to school grounds included vandalism and protecting the welfare of school animals.
- Weather and the necessary equipment for children to go outside. This was reported as a *'huge challenge'* for some schools.
- Expertise, for example around gardening.

- Knowledge of publicly-accessible green spaces. This issue was illustrated in one hub leaders' comment that teachers in one school *'didn't even know how to cross the park from one side to the other to join up with the footpath network in order to get to* [a National Trust property]. *So in a couple of weekends' time, one Sunday, we're going to walk the walk with staff, so that they've been outside the fence'.* A related issue was the condition of these green spaces and their suitability for school use.

23.3 What were the challenges to LINE reported during school case-study visits?

The challenges to LINE reported in case-study visits reflected those in the survey and hub leader data discussed above. Challenges cited in the case-study data were:
- **Time**. Schools reported that time was needed for the following activities because of competing priorities and ongoing pressures, which made it difficult to set aside specific time for LINE. They needed time to:
    - communicate the benefits of LINE to other staff members
    - develop their own understanding of LINE
    - develop their professional practice through informal and formal CPD
    - adapt their schemes of work so that LINE was embedded in curricular practice. This included developing banks of easily-accessible resources to teach outside.
- **Confidence** in:
    - senior leadership support – *'permission'* to teach outside
    - LINE as an effective approach to learning for all age groups
    - staff ability to teach effectively outside.
- **Funding** for staff CPD, supply cover so that staff could be released to attend CPD, grounds development including space for children to change clothing, and new resources and equipment.
- **The pressure of external examinations**. The national emphasis on external examinations was seen in some primary schools to discourage teachers in engaging with LINE for the Key Stage 2 pupils; some teachers reported that *'ensuring children made appropriate progress'* was more *'straightforward'* when done indoors.
- **Assessment**. School staff reported that it could be difficult to demonstrate pupil progress from LINE activities, and/or to assess LINE's contribution to their learning. Some schools reported that they used scrapbooks and photographic record books to evidence progress.
- **School grounds**. Schools reported a number of challenges related to school grounds:
    - lack of space, requiring innovative thinking for LINE activities
    - large spaces that needed careful planning to ensure sustainability of LINE
    - vandalism

o management and maintenance. Schools reported that they needed volunteers to help with tasks such as animal welfare and watering plants, particularly in the holidays.
- **Volunteers**. A few schools reported that they needed volunteers to support learning outside, and that recruiting and managing volunteers could be difficult.
- **Staff turnover**. This was seen to destabilise LINE development, particularly if a key member of staff left or changed role; they were not always replaced by an equally supportive new member of staff.
- **Working with LINE providers**. Some schools reported that developing an ongoing relationship with a high-quality LINE provider was difficult because of the lack of LINE providers in the area, or because providers lacked the knowledge required for curriculum delivery.

Summary

Challenges reported consistently by schools and hub leaders included:
- **time**, to understand, promote and develop confidence and professional practice in LINE. This was often difficult because of competing school priorities.
- **funding** for staff CPD, grounds development, clothing and equipment.
- **confidence** in LINE as an effective learning approach, in teachers' own professional LINE practice, and in their capacity/ability to support LINE in other schools.

This suggests that there were some challenges that were relatively common across schools. These common challenges were not universally-reported, however, and the wide range of challenges faced by project hub leaders and schools confirmed the point from the Insight research[23] that challenges to schools around LINE are localised. In addition challenges to LINE varied during the course of the project (see Figures 23.1,23.2 and 23.3), which suggests an ongoing process in which schools address one challenge and revisit it before moving on to another priority; teachers do not have the time and energy to address all challenges all the time. It may also be that some challenges require ongoing attention (such as planning schemes of work), but others (e.g. acquiring new waterproof clothing for pupils) are achieved, though they may need addressing every few years, while confidence will tend to grow with stability of practice in LINE over time. In summary, the range of challenges cited by project participants can be summed up as an overarching challenge of culture change; it takes time and investment of goodwill, energy and funding to make LINE happen and sustain it.

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[23] Rickinson, M., Hunt, A., Rogers, J. & Dillon, J. 2012. *School Leader and Teacher Insights into Learning Outside the Classroom in Natural Environments.* Natural England Commissioned Reports, Number 097.

KEQ 24. To what extent were schools supported in overcoming any barriers they faced when attempting more LINE activities?

Project element and objective:	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element can help schools overcome real and perceived challenges to engaging with LINE

KEQ 24. To what extent were schools supported in overcoming any barriers they faced when attempting more LINE activities?
24.1 What were the barriers to LINE?
24.2 How were schools supported in overcoming challenges to LINE?
24.3 To what extent were schools satisfied with the support given in overcoming their challenges to LINE?
Data sources
Hub leader interviews, school baseline survey, July 2014 school survey, July 2015 school survey, school case studies
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.
NOTES
Direct quotations from interviews are in *'italics and inverted commas'*

24.1 What were the barriers to LINE?

In KEQ 23 we discussed the challenges to LINE faced by project schools. Challenges reported consistently by schools and hub leaders included:
- **time**, to understand, promote and develop confidence and professional practice in LINE. This was often difficult to find because of competing school priorities.
- **funding** for staff CPD, grounds development, clothing and equipment.

- **confidence** in LINE as an effective learning approach, in the support of senior leadership for staff to practise LINE, in teachers' own professional LINE practice, and in staff capacity/ability to support LINE in other schools.

These challenges were not universal, however, and evidence provided by schools and hub leaders demonstrated that schools faced a wide range of challenges that changed as their LINE activity developed. The different speeds of school LINE development and their individual circumstances meant that challenges could be highly localised; in KEQ 23 we called this the 'challenge of culture change' because the evidence demonstrated that the key factors in developing LINE in schools were senior leadership support, strong LINE leadership and school investments of time, goodwill, energy and funding.

24.2 How were schools supported in overcoming any barriers they faced when attempting more LINE activities?

Hub leaders' central role was to broker the types of support that schools needed to engage more actively with LINE, and in KEQ 14 we discussed hub leaders' brokerage of CPD, LINE provider services and school grounds development services. Evidence from this KEQ shows that:

- The proportion of schools reporting engagement with LINE-related CPD rose from 55 to 67 per cent, a statistically significant increase (p-value=0.05).
- Schools from all hubs reported that they valued the networking and informal CPD opportunities afforded by the hub leaders.
- Schools' individual CPD needs changed throughout the project. These were dependent on their own LINE development, changing school priorities and local/national policy demands.
- Schools were prepared to pay for services, although the local circumstances of each school determined which services and the level of payment.
- LINE providers were used largely for CPD and school grounds development rather than lesson delivery. Some schools set up ongoing relationships with LINE providers.
- School grounds development was valued, both as a resource for teaching and as a support/stepping stone for staff to develop their practice, confidence and expertise.
- Schools used funding from a variety of sources to resource their LINE activities.
- The evidence suggests that schools needed funding at specific points in their LINE development. This was generally when the school had engaged with the concept of LINE, was ready to undertake greater levels of LINE activity and understood the resources needed to enable that activity.

In the following sub-sections we outline the hub leaders' different models of supporting project schools in overcoming challenges to LINE.

Bristol

Throughout the project Bristol hub leaders supported schools in different ways in overcoming their challenges to LINE, although their delivery model changed in response to school feedback, their own reflections on project progress and demand for services they either offered or brokered. Their support systems included:

- **Individual work with beacon schools**
  The hub leaders initially worked with LINE leads in beacon schools to provide regular opportunities for conversations to identify challenges so that *'there are enough book marks throughout the year* [so] *that there is always an opportunity to flag something up before it becomes a barrier, that thing of 'I am having problem with...' rather than 'I can't do this because...'.* Hub leaders focused in the initial meeting on the needs and barriers expressed by LINE leads, and this information fed into the strategy for regular beacon school meetings.

- **Action plans for beacon schools**
  The hub leaders supported every beacon school in developing its own action plan which focussed on short-, medium- and long-term goals. Hub leaders saw their role as working through the action plan with the schools and supporting them in their strategic and operational outlook, asking them *'why you want the help and what that will help you to do'.* Information from the action plan helped schools to identify the type and timing of any support needed, and supported hub leaders in identifying any common needs across the hub.

- **Networking, informal and formal CPD**
  The hub leaders' main support mechanism for schools was through networking, and informal and formal CPD. The delivery model changed as the project developed. Initially hub leaders offered a programme of formal CPD sessions alongside the regular networking/informal CPD sessions that were open to both schools and LINE providers. Hub leaders reported that schools attending these meetings valued the time in these informal sessions to talk to each other, to exchange e-mails with each other and with providers, and *'to get tips off each other'* ; however poor attendance at formal CPD sessions led hub leaders to re-think their strategy and incorporate their LINE-related CPD into the networking meetings. In their exit interview, hub leaders reported that new relationships between schools could arise at any time through this informal networking, and that they continued to match schools if one had an area of expertise that another would like to draw on.

- **Grants**
  The hub leaders applied for a grant to buy every beacon school three sizes of wellies and waterproofs because they felt staff at beacon schools were using weather as an excuse not to engage in LINE; supplying wet-weather clothing would enable hub leaders to say: *'Right, you have got that equipment now, now go outside!'.* Applications for this type of funding were unsuccessful, however, and in the end

schools used project grant money to fund the purchase of wet weather kit for children. Beacon schools could also apply for project funding to:

- o Release staff for meetings and/or CPD by paying for cover in the development phase of the project
- o Fund school grounds improvements in beacon schools that facilitated curricular work outside.

- **Continuing support**
The Bristol hub leaders felt from an early stage of the project that there needed to be *'a changing of minds through slow exposure'* to LINE and its benefits; considering sustainability of their LINE network has been a central part of their planning, and the project is now branded as #thisisaclassroom. The Bristol model was one of a collaborative network that offered an annual networking conference and regular CPD / networking sessions in-between. Further support was offered through the Wild Time for Schools web-based app, to which schools had free access at the time of writing, which provided outdoor activity ideas for teachers and was quality controlled by staff from beacon schools.

Cornwall

Cornwall hub leaders supported schools in overcoming barriers to LINE in five different ways:

- **Identifying key personnel in beacon schools**
The Cornwall hub leaders reported that their approach to embedding LINE in schools focused on identifying the *'right leaders and advocates in a school'* as key to introducing new ideas and changes. Originally the intention was that these LINE leads should ideally be Specialist Leaders in Education (SLEs), in order that they would have the confidence and skills to persuade both staff in their own school and potential cluster schools of the benefits of LINE. While this was possible for several LINE leads, it was not possible for all, and hub leaders focused on offering training for LINE leads to support them in their work in engaging cluster schools. Hub leaders worked with the central team to devise a Master's level leadership course ['Outdoor Champions'], held at Plymouth University, in response to this particular need.

- **Intensive, *'front-loaded'* support for beacon schools**
The hub leaders provided intensive support for beacon schools and the start of the project through a combination of beacon school meetings, wider conferences and regular visits to beacon schools. This *'front-loading'* of project funds aimed to:
  - o ensure school leaders were fully supportive of the project
  - o help schools evaluate their grounds, suggesting ideas for improvement and *'translating'* ideas between schools
  - o encourage schools to take ownership of the project while fostering a flexible approach to embedding LINE in their school and cluster

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- provide a generic job description for the LINE lead, so that s/he had an understanding of what the role entailed.

- **Regular visits to project schools**
  Hub leaders undertook termly visits, first to beacon schools and in the latter stages of the project to some cluster schools, which enabled them to:
  - support senior managers and LINE leads to resolve issues as they arose
  - give advice about and support practical initiatives
  - transfer ideas and solutions between schools
  - develop an overall view of the project across the county.
  - Hub leaders reported that they took *'great care'* to ensure that the visits were *'supportive rather than inspectoral'*, and believed that they *'played an important part in maintaining* [project] *momentum and* [staff] *confidence'.*

- **Networking**
  A further programme of half-yearly beacon school meetings, held in each beacon school in turn, enabled each to showcase an aspect of their LINE practice, and provided the opportunity for participants to *'share information, experience and expertise, plan strategically and collaboratively, and articulate their needs and concerns'.* Hub leaders reported that these meetings were well-attended, and that they were regarded as *'the cornerstone'* of the project that enabled schools to develop a balance between *'independence and collaboration'.*

- **Signposting relevant CPD**
  Hub leaders reported that they wanted to ensure that schools were not *'flooded'* with too many CPD offers and, apart from running workshops at conferences and beacon school meetings, tended to signpost available CPD offered by OPAL, the Kernow Education-Arts Partnership, Nature Workshops and other providers. They also formed a partnership with Wild Tribe, who delivered LINE training for both project and non-project schools. CPD provision in Cornwall was supported by a £5,000 grant secured by the hub leaders from the Ernest Cook Trust.

- **Continuing support**
  Hub leaders reported that the project *'has released a huge amount of enthusiasm and energy for LINE'*, and that it *'is increasingly being integrated into programmes of learning'* in schools. At the time of their exit interview, hub leaders were planning a final beacon school meeting in which schools would discuss the future shape of the project, prompted by a hub leader paper in which different options were set out. Applications for further grant funding to sustain the role of hub leader were being drawn up, and hub leaders were in conversation with local health and nature partnerships about future, funded LINE-health related projects.

North Somerset

North Somerset hub leaders worked in collaboration with the Bristol hub to combine their outdoor learning expertise with greater school experience from early on in the project lifetime. This had benefits for both hubs. North Somerset nonetheless continued to support schools in a variety of different ways.

- **Initial meetings**

  Initially hub leaders spent time facilitating internal beacon school conversations and encouraging schools to develop action plans to enable effective and timely support. As was the case with the other hubs, North Somerset hub leaders reported that schools had a wide range of disparate challenges, and that generic support was not appropriate.

- **CPD**

  From an early stage the North Somerset hub leaders were interested in working collaboratively with the Bristol hub, and from the time of the July 2014 Bristol conference, which was open to North Somerset schools, there was active collaboration between the two hubs and the North Somerset hub leaders contributed to the wider CPD programme. Nevertheless, North Somerset hub leaders offered separate CPD to beacon schools and to schools in the hub area that were unable or unwilling to access the Bristol training; their background in Forest Schools complemented the curriculum-focused CPD of the Bristol hub. Support offered to project schools included a John Muir Award training day, reduced-fee Forest School training and school grounds advice.

- **Project school meetings**

  The hub leaders ran some beacon/cluster school meetings but, due to the wide geographical area of the hub and the disparate types of school involved, these were not well attended. By early 2015, hub leaders were developing the idea of three mini-hubs in different areas, and after-school networking / CPD sessions were held in each of the three areas for local project schools. Those unable to join these network meetings were able to attend the wider network meetings in the Bristol hub.

- **Wild Time for Schools app**

  The hub leaders contributed towards funding the development of this web-based app as part of their collaborative work with the Bristol hub leaders. The app is available to support project schools in North Somerset.

- **Grants**

  North Somerset offered grants to project schools for school grounds improvement, including providing logs for outdoor classrooms. Hub leaders were also able to offer reduced price trees to project schools.

- **Continuing support**

At the time of the exit interview, support for project schools was continuing through the Bristol networking meetings and the Wild Time for Schools app. One mini-hub was facilitated by the Wiltshire Wildlife Trust, who have absorbed schools' ongoing engagement with LINE as part of their remit; the hub leaders were continuing to work with the other two mini-hubs to establish a sustainable network of LINE-engaged schools.

Plymouth

Plymouth hub leaders recruited the highest number (33) of schools across the hubs, and supported them in a range of different ways:

- **Individual work with beacon schools**
  Consultation and support for beacon schools included:
  - One-to-one support and advice, initially through a visit to each school in which their plans for the project were outlined and discussed. One hub leader team member was allocated to provide ongoing support as required throughout the project lifetime. During these visits hub leaders would both support and challenge LINE practice in the school; the aim was to promote a sufficiently strategic approach to LINE that it could become embedded in school practice.
  - Encouraging schools to develop action plans. Plymouth hub leaders reported that these were a *'key mechanism'* for school planning, in which schools outlined a *'clear programme'* that involved promoting LINE to other staff throughout the school, so that *'all staff can see the opportunity for LINE'.* Hub leaders could then offer appropriate funds and support to implement the action plan.
  - All beacon schools were offered a day of time from the Devon Wildlife Trust to help them devise a long-term plan for their school grounds. Children and governors were included in the process. Hub leaders reported that school grounds development was part of a *'natural stepping stone'* to developing LINE activities; schools needed somewhere structurally sound where teachers could learn to take risks outdoors/gain confidence before experimenting more widely.

- **Networking / CPD**
  The beacon school meetings set up by the hub leaders provided an opportunity for schools to discuss the direction of the project, and to share information and practice. The meetings were quickly expanded to include LINE providers and all project schools, and they developed into a combination of networking opportunities and CPD provision; hub leaders reported that these meetings were well attended, and that feedback from schools showed that they valued *'the opportunity to network and share'.* As a result of some of these CPD opportunities, resource packs were developed for woodland, beach and pond LINE activities, and held in the local Scrap Store for all schools to borrow.

- **Grants**

  Plymouth hub leaders offered grants to project schools, which were used for:
  - School grounds development, such as creating willow structures and an outdoor maths trail.
  - Improvement of local woodland.
  - Developing and running joint LINE activities between schools.
  - Applying for matched funding, for example from the Arts Council, to run collaborative projects in the school grounds and wider natural environment.

- **Continuing support**

  Post-project, the hub leaders have set up a subscription service to provide continued support to schools. All subscriber schools are offered a termly school visit, regular network meetings, visits to natural environment sites and CPD opportunities.

Torbay

Support for Torbay schools was provided by two different hub leaders: RIO, from project inception to October 2014, and Mel Easter from November 2014 to the end of the project. RIO's approach to supporting schools included:

- **One-to-one support for beacon schools**

  RIO's initial focus was on visiting potential beacon schools and then working intensively with them to identify innovative and sustainable practice and then to support them in developing that practice. This practice stopped with a change in personnel towards the end of 2013.

- **Networking / CPD**

  The LifeLINE network was the main CPD delivery and networking mechanism offered by RIO to all schools potentially interested in LINE and/or the project. It involved a series of linked CPD sessions which included:
  - delivery of a specialist session at one of the beacon schools. This would sometimes draw on the beacon school's expertise but at others would have external providers; the aim was to take one particular area, for example clay oven building, and show how its use could be integrated across the curriculum. All schools interested in LINE were invited.
  - follow-up collaborative work with schools to support them in embedding the selected area into the curriculum
  - individual school work on the selected area
  - a final LifeLINE network meeting to disseminate the experiences and learning from this area of learning.

  RIO reported that the LifeLINE network was successful in creating a *'sense of community'* among a small number of schools committed to LINE, and that these schools valued the opportunity to share information and practice, accessing new

forms of CPD and receiving *'acknowledgement and encouragement'* for their LINE work.

- **Grants**
  RIO offered grants to schools, which were used for:
    - Infrastructure, such as a composting toilet in a Forest School site.
    - LINE-enabling equipment such as outdoor clothing for children.

The second hub leader, Mel Easter, was appointed in November 2014 and supported schools in a number of ways new to the hub. She:
- introduced **beacon school meetings** and **wider networking meetings**. She reported that schools quickly began working together, visiting and developing outdoor provision with each other.
- **signposted schools to CPD** opportunities with other organisations beyond Torbay.
- **funded places** for staff from Torbay schools on an outdoor learning practitioner course.
- established a **working group** to plot the use of LINE for science into the new curriculum; this will be shared with all schools when completed.
- produced a **resourcing and funding fact sheet** in collaboration with one school that has been shared among all project schools.
- started to draw together a **list of local LINE providers** as information for schools
- **made links** with the Torbay teaching alliance and curriculum network, Public Health Torbay, the Torbay Coast and Countryside Trust and the Dartington Deer Park Heritage Project to develop further momentum and support for LINE in Torbay schools.

24.3 To what extent were schools satisfied with the support to overcome their challenges to LINE?

In KEQ 18 we drew on survey data to discuss in detail schools' levels of satisfaction with the support offered to overcome their challenges to LINE. In this KEQ we focus on the qualitative evidence provided by school case-study visits on schools' degree of satisfaction with the support offered by the project.

Specific challenges, such as purchasing wet weather equipment, managing school grounds, the lack of storage and/or space for children to change, and vandalism were mentioned in case study visits; schools were addressing these through a variety of approaches that included hub leader support (for instance, in accessing funding), linking with other schools (for example by sharing equipment and/or resources) or finding their own solutions. One innovative example of a school managing their large and diverse school grounds, described by the LINE lead as a *'real worry'*, came from the school's partnership with Plymouth University. The school is currently a John Muir Trust awarding authority, and each year a

number of University placement students come in to the school for a week to support Year 6 children in the four aspects of the John Muir Award: discover, explore, conserve and share. All lessons apart from maths are suspended, and students, pupils and the LINE lead spend the rest of the week outside. The 'conserve' aspect of the award is *'one of the biggest bits of the week'* and together staff, students and pupils undertake such tasks as maintaining the boardwalk, clearing the pond, re-laying woodchip paths and repairing bird boxes. The whole is regarded as *'the highlight of Year 6 for the children'* and enables the school to undertake essential grounds maintenance within school time.

The deeper challenge reported by almost all case-study schools, however, was the one related to culture change (see KEQ 23 for a detailed discussion), in which the difficulty was to convince other staff of LINE's benefits, to develop their confidence in taking lessons outside, and to embed LINE in school curricular activities. In this context, staff in all case-study schools reported that they valued the support offered through networking/CPD meetings; networking and training were seen as the key ways in which to raise the profile of LINE and give the confidence to encourage staff to get involved. One interviewee summed up the general view of project support when he commented that collaborating, networking and sharing best practice were beneficial to all involved:

- *'Just the very fact of being able to look outward and work with … other schools and get ideas from other schools and to be able to exchange ideas and exchange experiences with other teachers, I think is a massive benefit'.*

Another commented on the validation given by the project to LINE:

- *'It's been brilliant to have a big organisation backing and legitimising this project, so that I can talk with confidence to staff of my beliefs about what we should be doing with the children'.*

Other ways in which the project was seen as helpful either to LINE within the school or more broadly were in:

- *'getting the message out to other schools'* to encourage wider use of LINE locally and regionally.
- giving LINE work within schools *'credibility'* within and between schools. In the view of one interviewee, the project had turned LINE into *'serious project'* from *'just a tree-huggy thing!'*
- creating a network of enthusiastic practitioners who were willing to share knowledge and experience.
- enabling joint projects and encouraging *'a sharing approach'* between schools.
- the *'practical and strategic support'* offered by beacon schools.
- providing a formal context for LINE activities and enabling a strategic approach
- the opportunity for staff development.
- funds for developing grounds.

Areas of dissatisfaction with support included:

- the website: *'the information isn't there'.*
- lack of clarity around the beacon school role.
- the difficulty for beacon schools in involving cluster schools in the project. One headteacher commented that the clusters were *'too big'*, and that a cluster of three schools for each beacon would have been more manageable. A teacher suggested that beacon schools should link to those schools that wished to draw on their area of expertise rather than employing the *'all-encompassing'* beacon school approach, which was seen as onerous for the beacon school.
- the difficulty of involving volunteers.

KEQ 25. Did schools sustain increased levels of LINE activity?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element encourages practices to become embedded
KEQ 25. Did schools sustain increased levels of LINE activity? **25.1** What were the patterns of change of LINE activity in schools? **25.2** What examples of culture change did hub leaders provide? **25.3** What examples of culture change did schools provide?	
Data sources School baseline survey, July 2014 school survey, July 2015 school survey, hub leader interviews, June 2013/2014 and November 2013/2014 activity logs, May 2015 activity survey, school case studies	

Key Points
• Schools appeared to have sustained:
   o increased staff involvement in LINE
   o an increase in the amount of time spent on LINE.
• The increase in LINE activity occurred alongside an increase in school documentation that referenced LINE, suggesting an increased level of embedding LINE into schools' day to day activities.
• Funding continued to be spent on LINE and on activities that helped enable and sustain LINE, such as CPD and changes to school grounds.	

NOTES In this KEQ we provide a comparison between all schools and the subset of 25 schools that completed the baseline, July 2014 and July 2015 school surveys. The proportion of Plymouth schools to subset schools was nearly 50 per cent, whereas it is just 27 per cent and 29 per cent for the all-school baseline and July 2015 data respectively. Therefore potential bias toward Plymouth-specific issues in any comparisons should be noted.	

In KEQ 5 we examined whether schools were investing in LINE during the project life time. In this KEQ we look at the subset of 25 schools that completed three school surveys (baseline, July 2014 school survey and July 2015 school survey) to understand sustainability over a period of just over two academic years. The figures below illustrate the data from these surveys and are compared against total project figures where appropriate. We then discuss examples of culture change around LINE reported through hub leader interviews and school case studies.

25.1 What were the patterns of change of LINE activity in schools?

Figure 25.1 below shows the percentage of teachers that were involved in LINE as reported by schools. The subset reported initial higher levels of teacher involvement in LINE (46 per

cent) than all schools combined (32 per cent). This then rose in the July 2014 school survey (71 per cent) and stayed at a similar level in the July 2015 school survey (68 percent) when it was still higher than the all-school total of 52 per cent. It is worth noting, however, that 19 of the 25 subset schools were beacon schools; these tended to have previous experience of LINE and to show relatively high levels of engagement with LINE throughout the project.

A similar pattern is repeated for TA involvement in LINE, albeit with a slightly lower percentage of involvement shown in the 2014 and 2015 surveys (60 per cent and 59 per cent respectively), and the same explanation is offered to that of teacher involvement, namely that the majority of subset schools were beacon schools with existing practice and experience of LINE.
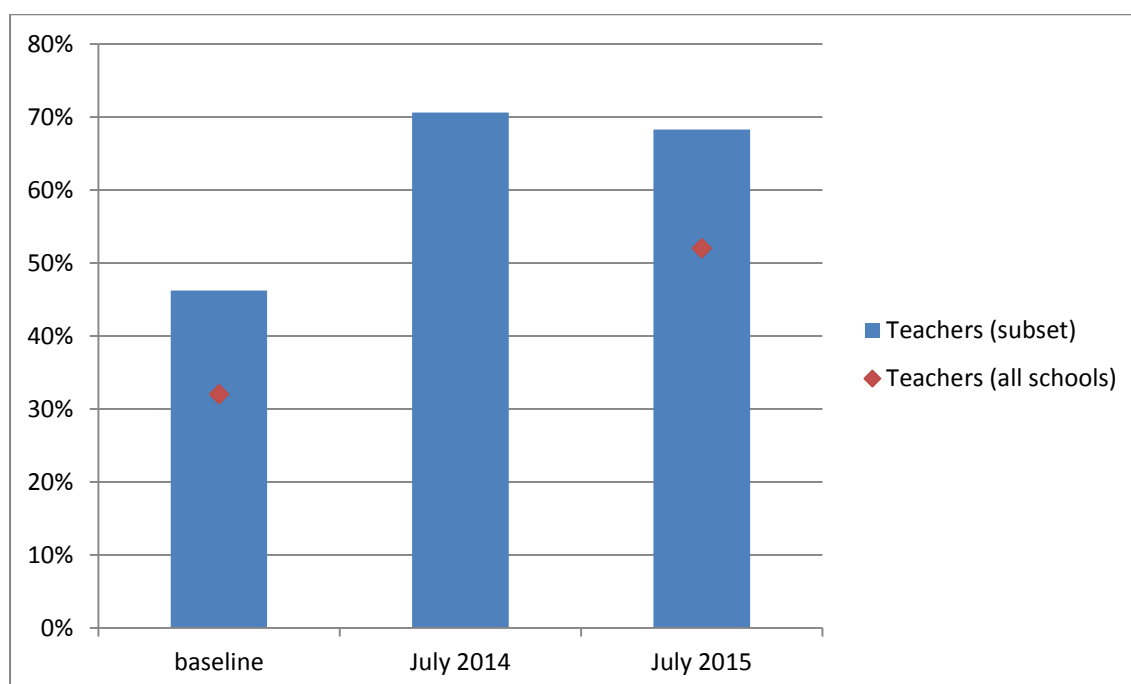
Subset n=25: Bristol n=2, Cornwall n=5, North Somerset n=2, Plymouth n=12, Torbay n=4
All schools.
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 n=87: Bristol n=17, Cornwall n=12, North Somerset n=15, Plymouth n=25, Torbay n=18.
Figure 25.1: Percentage of teachers involved in LINE (subset schools and all schools)

Figure 25.2 shows that levels of CPD activity in subset schools stayed relatively constant during the project lifetime, dropping slightly from 68 per cent in the baseline to 64 per cent in July 2015. This contrasts somewhat to a statistically significant rise (p-value=0.05) from 55 per cent to 67 per cent in all schools across the project. The subset schools' overall higher levels of engagement with LINE CPD may have been due to their higher initial engagement with LINE, and their consistent levels of CPD engagement during the project lifetime suggest that LINE continued to be valued and schools continued to invest in development and training for staff.
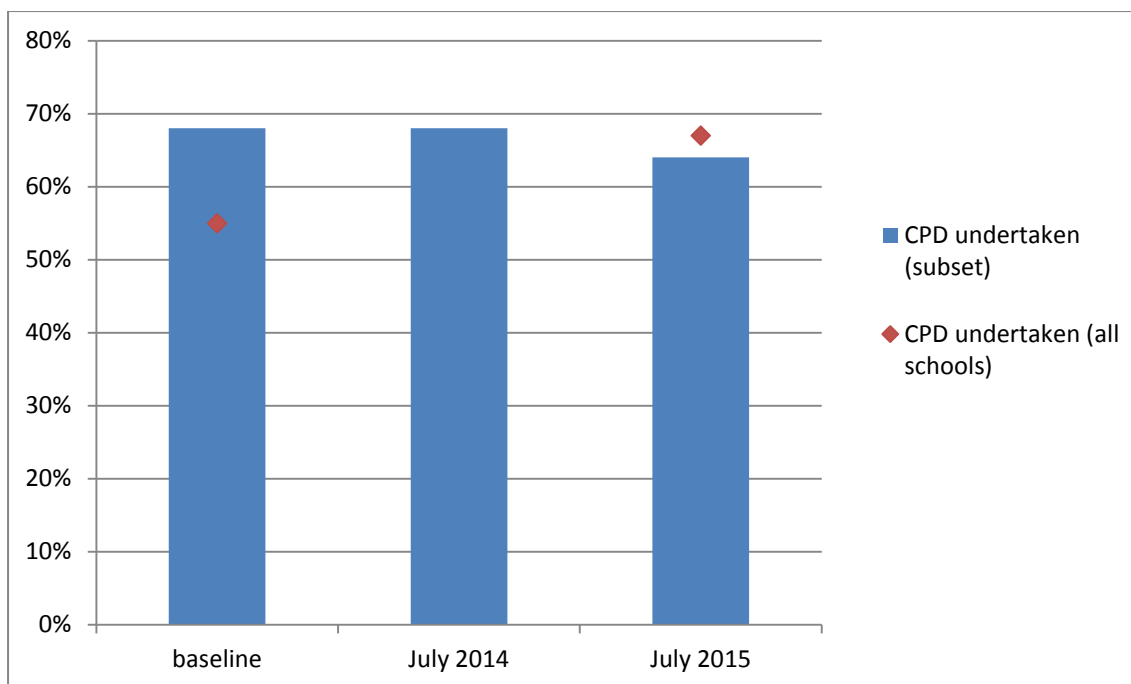
Subset n=25: Bristol n=2, Cornwall n=5, North Somerset n=2, Plymouth n=12, Torbay n=4
All schools.
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 n=87: Bristol n=17, Cornwall n=12, North Somerset n=15, Plymouth n=25, Torbay n=18.
Figure 25.2: School CPD activity (subset schools and all schools)

Figure 25.3 below shows the change in schools that had either a specific LINE policy or had LINE referenced in strategic school documents such as the SDP. One hub leader felt that the presence of LINE in the SDP was significant because it demonstrated that the headteacher's involvement in making LINE a priority for the school. The subset had a higher initial proportion of schools with one or other of these documents (84 per cent) than all schools (60 per cent) and this rose to 88 per cent in July 2015. The proportion of all schools with one of these documents rose from 60 to 75 per cent, a statistically significant increase (p-value<0.01).
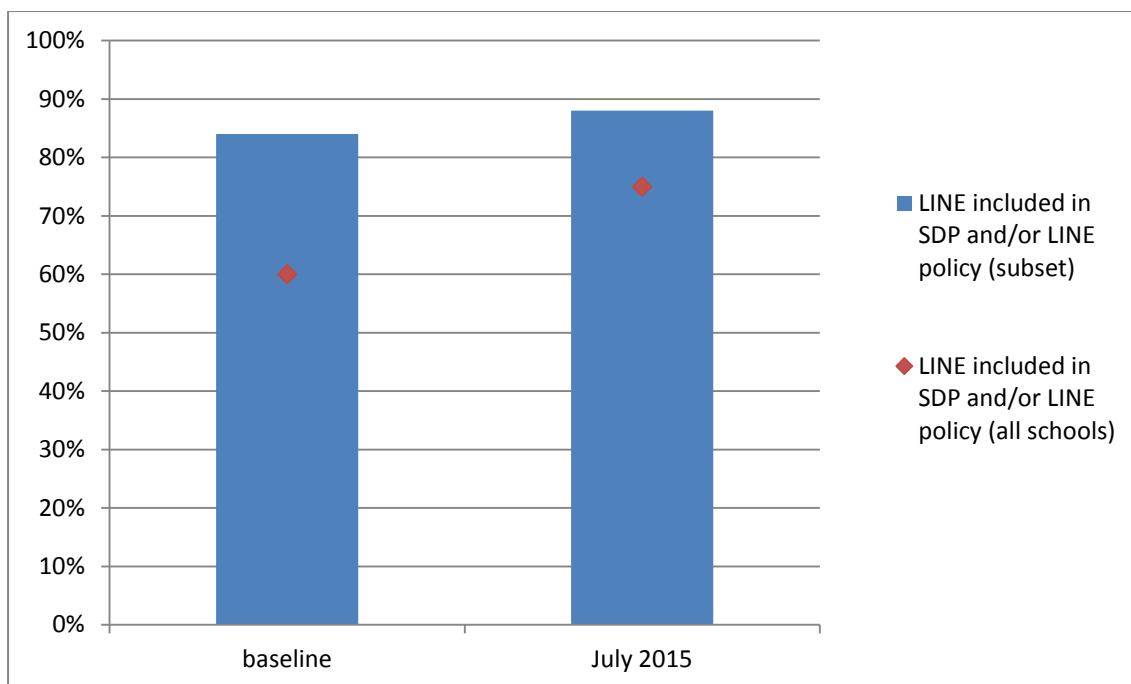
Figure 25.3: LINE documentation (subset schools and all schools)

Figure 25.4 below shows the proportion of schools that made structural changes to their grounds or nearby green space in order to enable LINE activity. The subset reported a high level of change in the July 2014 school survey (84 per cent) which dropped to 40 per cent in the July 2015 school survey (compared to 44 per cent for all schools). This suggests that schools ensured their grounds were LINE-ready, possibly maximising the availability of project funding, after which development activity dropped off. The fact that grounds development did not stop completely illustrates the point that some schools maintained levels of activity through engaging pupils in school grounds development as a way of providing meaningful learning experiences. For example in one school children wrote to local companies asking them to donate seeds for an area to be planted.
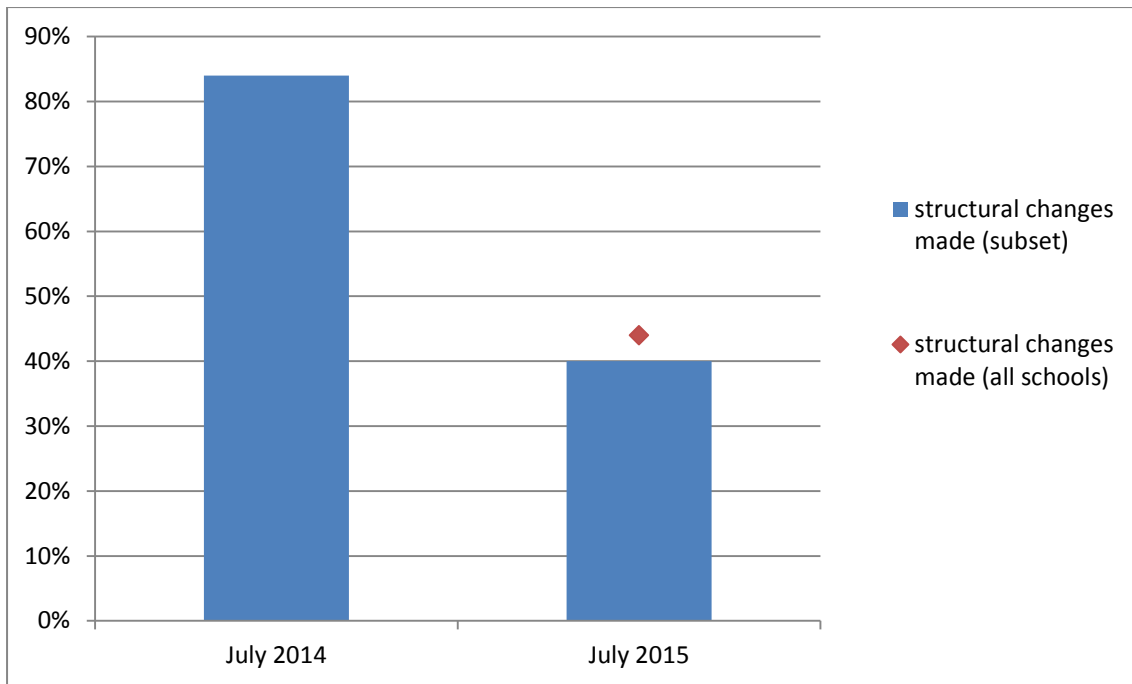
Figure 25.4: Schools making structural changes to school grounds (subset schools and all schools)

Figure 25.5 shows a slight increase in spend on LINE from school budgets from 76 to 80 percent between the July 2014 and July 2015 school surveys among subset schools. The July 2015 subset figure is higher than the all-school total (66 per cent), suggesting that these schools continued to value LINE and therefore invested in its delivery.
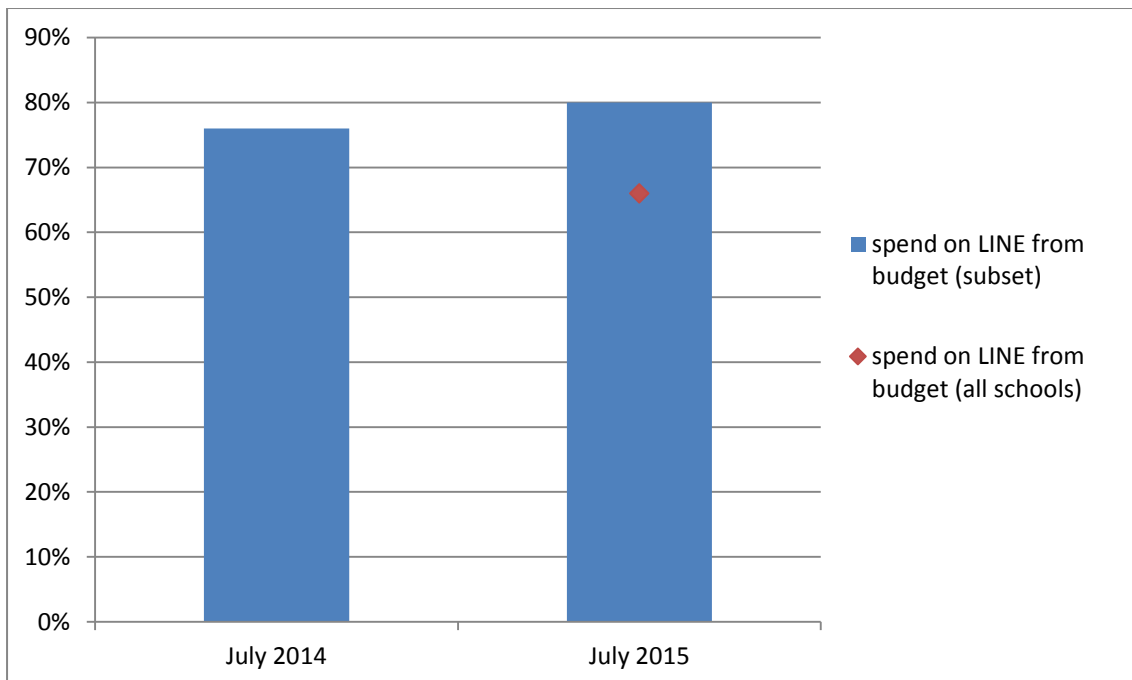
Figure 25.5: Spend on LINE from budget (subset schools and all schools)

25.2 What examples of culture change did hub leaders provide?

Bristol

By March 2015 the Bristol hub leaders reported that most of the beacons had '*very much taken on board the idea… of LINE being something that is taken on as a whole school and woven through the curriculum and that it isn't just one person's responsibility.*' They felt that two critical factors in changing school culture were senior management support and convincing teachers about the potential benefits of LINE. Hub leaders argued that if the project sat at a strategic level in a school, it gave '*permission for teachers to engage in it in a curricular way … you would have to be hardnosed … in order to not believe in the benefits of being outdoors.*'

The hub leaders described changing LINE activity and culture as a *'drip-drip process'.* They described how one LINE lead in a beacon school focused on supporting staff with small activities that they could manage and that encouraged them to think about how to incorporate LINE into planning. In a second example the hub leader reported that in one beacon school '*you could tell that there were things already happening in the school …there was a common language; it was an understanding of the project, they* [staff] *knew what that meant, they accepted it'.*

They also gave the example of a school that had focused all its LINE work and other out-of-classroom learning on one year group only. Taking the view that if '*you don't saturate the curriculum it doesn't become embedded'*, the school *'saturated'* the Year 2 curriculum with opportunities for LINE that included woodland activity, historical activity and geographical exploration.

Cornwall

The Cornwall hub leaders felt that by the end of 2014 '*there is genuine evidence that LINE is being embedded across the curriculum'* in some project schools. They gave the example of staff in one beacon school who '*have noticed that children are now using the outdoor spaces more purposively than they ever have done, without direction.*'

The hub leaders reported that beacons took different approaches to expanding their LINE activity, with some beacons embedding and securing their practice and extending it within their own school, and others developing new approaches. One example came from a beacon school, in which staff were given the opportunity to work outdoors without specific curricular objectives in order to lay a foundation for more curricular specific learning by developing their confidence and general skill levels. This was felt to be '*very effective'* in improving staff confidence and increasing activity levels. Hub leaders noted that the headteacher in this case now felt that the need for 's*tepping that up a gear and moving from <u>playing</u> in the natural environment to <u>learning</u> in the natural environment.*'

North Somerset

Initially the hub leader felt that schools split into two broad camps:

- Those that took learning outside but this learning varied little from the type of learning undertaken in the classroom
- Those schools where learning outside was fundamentally different to learning in the classroom. Examples included schools that were interested in and practised Forest Schools.

During the project the hub leader reported that LINE was a long way from being integrated into most schools, and that most were at the stage of building confidence and making LINE activity a regular occurrence rather than moving LINE forward as a new way of teaching. By the end of the project the hub leader still felt this was broadly the case, and gave the illustrative example of a Forest School leader who felt they had not been able to mentor teachers in new ways of teaching due to the limited time that they spent on LINE. The result was that teachers tended to move indoor classroom practice outdoors.

Plymouth

By the end of the Plymouth contract, hub leaders reported that there were 15-20 schools committed to LINE and overall they were '*reasonably surprised'* by the enthusiasm and '*overall positivit'y* toward the project when taken in the context of the general pressures that schools were under.

The hub leader gave a number of examples of sustainability in project schools including:

- One school where other initiatives such as the healthy child quality mark were progressing alongside the more culturally embedded LINE work. They felt that LINE was an central part of what the school did.
- Another school moved from being 'at risk' to 'outstanding' during the course of the project, a position attributed by the headteacher to children wanting to come to school because their work has become more interesting. LINE was an integral part ofthe school's everyday practice.
- Teachers were starting to deliver CPD through the LINE network meetings and other events. These included practical skills such as bush craft sessions during the Plymouth 'woodland week' and curriculum planning sessions at different times of the year.

Torbay

The original hub leaders felt the project should have focused more strongly on fewer schools in order to secure a fundamental change in practice. They felt that if all the available resources were used in, say, just five schools then this would have created an '*unshakeable hub'* where LINE could be embedded right across the curriculum.

- RIO argued that their CPD model enabled LINE to be embedded in the curriculum, drawing onthe example of the LifeLINE clay oven building session at Brixham

School to illustrate their point. The practice of building a clay oven and its subsequent use offered numerous links to the new national curriculum, including 'the stone age', and created a wide range of learning opportunities for all pupils.

- The first hub leaders felt that most schools in Torbay seemed to be following a model with a Forest School Leader who took responsibility for much of the outdoor learning. This meant that class teachers were freed to link curriculum work with the Forest School planning.
- Other schools have introduced annual initiatives such as the Collaton country show. These aid the sustainability of LINE by making such events a routine part of the school year.
- One primary school's Development Plan states that *'all pupils are seen as gardeners'.* The hub leaders commented that teachers in this school were *'just as rigorous and … have such high expectations around choux pastry and around horticulture as they do around, you know, literacy and maths.'*
- The second hub leader expanded project influence in schools through work such as mapping science to the new curriculum. This was seen as creating a greater sense of ownership and a stronger likelihood that schools would use the mapping as they were meeting their own needs with the work.

25.3 What examples of culture change did schools provide?

The case studies revealed that, overall, schools needed to adopt an incremental or gradual approach to integrating LINE into all practices so that they could claim to have a whole-school LINE-focused ethos. One school described LINE in their school as a '*work in progress'* and this view was broadly shared across case-study schools. Very few had fully integrated and embedded LINE into their practices and those that felt they possibly had, viewed their current position as achieved through a long, gradual process. All were committed to this process, but reported that there were many competing priorities for time and money within schools. The next sections illustrate examples of culture change in case study schools.

- **Increased staff confidence**

Interviewees in most of the case-study schools felt the staff understood the benefits that LINE could provide for the children on an intellectual level, but reported that LINE practice amongst staff was variable and depended primarily on staff confidence. Staff were felt to be capable of making curriculum links, more often than not with work outdoors, just as they would with any planned activity. One LINE lead commented that the aim in her school was for '*every member of staff to have that toolkit in their head like they do for literacy, numeracy and science; to be able to go, 'I could teach this outside and this is what it looks like'. And just seamlessly go and do it!'*

During the course of the case study visits, several NQTs were interviewed and, although there was little evidence of extensive references to outdoor learning within training programmes, these teachers were keen to practice their knowledge and skills in an outdoor context: '*It* [LINE] *allows me to use different skills in a different environment to the classroom. It has helped me to develop confidence in a range of teaching methods and styles. For example, delivery in a classroom is very methodical. Outside you can step back and relax, give them the resources and the methods to use and they can explore more than just us delivering it to them all the time.'* LINE was seen by some as an opportunity in which inexperienced teachers could relax into their roles and learn how to allow themselves to relinquish some control of the learning process to students.

LINE also enabled more experienced staff to expand their pedagogical approach to allow children greater freedom. This was a different way of working for many, leading to initial concerns around, for example, pupil behaviour. The case studies show, however, that once staff have seen the benefits that working outside can bring and as children get used to working outside, so staff confidence increases and presents as less of a challenge.

- **Complementing other initiatives**

A success factor for LINE cited in many case-study schools was the way it could fit in with and enhance the delivery of other school initiatives. Interviewees reported that LINE could be part of a school vision for experiential learning; for the THRIVE programme used by some schools to provide emotional support for pupils; for healthy schools accreditation; and for skills-based curricula. Evidence that LINE contributed to staff and pupil emotional health and wellbeing was also an important element of its overall adoption.

All the case-study schools referenced Forest School in some form; in some cases this had been successfully embedded into the school time table, and in others it was linked to the curriculum. Schools used a number of strategies to make sure Forest School was timetabled, including employment (or training of existing) of TAs with Forest School qualifications and the use of teacher PPA time to deliver Forest School alongside a programme of other enrichment or skills development activities. In a few instances the use of the experiences in Forest School was integrated fully into curricular work. In these cases Forest School leaders were often used to support the development of staff confidence, partly through exploring working outside without curriculum constraints.

- **Embedding LINE into school practice**

LINE leads stressed the importance of having LINE embedded in the curriculum if it was going to be embedded in general practice, and a number of them took active steps to ensure this. Examples included:

   o Staff in one school were writing their own cross-curricular content for the new National Curriculum to make working outside easier for teachers: *'we are including outdoor learning right the way through all the topics so no-one will do any topic without it having a LINE element'.* Another school intended to

weave LINE through the core curriculum areas of English and maths and then use LINE in more topic-based work in the afternoons. For example, the Year 2 topic 'Go Wild' was based around the outdoor environment but used to facilitate learning '*within*' the classroom for example through using outdoor experiences as inspiration for creative writing.

o   One school used its curricular enrichment time to work outside every week, with the aim of developing staff and pupil confidence in working outside without the pressure of curriculum outputs. As confidence grew, staff began to link this work to the curriculum and to take different curriculum subjects outside.

Where LINE was used in case-study school curricula, it was most commonly associated with core subjects. Interviewees generally reported that science was the easiest subject to link with LINE; they often spoke of taking maths and English outside. In one school the SEN TA led a mixed-age maths intervention group which was a standalone intervention targeted particularly at children who needed to improve their maths skills and confidence. The aim was to embed the intervention within the school as staff developed their confidence in leading maths outside.

- **Cross cutting curricular activities**

A number of schools were able to make use of external initiatives such as local art competitions enable cross-curricular work through LINE. One school used a boat trip as inspiration for art work but drew on the LINE experiences across the wider curriculum including literacy and science.

The case studies demonstrated that LINE was often most evident in Foundation and Key Stage 1 classes, often developing directly from established Reception practice where the use of the outdoors is frequent and closely linked to play. One Early Years teacher talked about having a clear plan for early years children, using The Bristol Standard (a self-evaluation framework which helps Early Years, Childminders and Play settings to develop and improve the quality and effectiveness of their provision through an annual cycle of reflection), and linking all parts of this to a dedicated outdoor area for the class. The headteacher had encouraged use of this framework. This proactive approach enthused other staff involved in developing the EY outdoor area, and resulted in a painted shed, added plants and vegetables, painted pots, weaving products, mini beast trails, wigwams and a mud hut.

- **The influence of committed individuals**

Often the embedding of LINE was driven by passionate individuals in the first instance, and if that passionate individual happened to be the headteacher, the use and variety of LINE was likely to be greater. In one case-study school the head was fully supportive of LINE, which meant that the school '*embraces*' learning outdoors and there was an explicit expectation that if something could be taught outside, it should be. Several of the headteachers

interviewed during the case-study visits referred to their own experiences of the outdoors as influencing their commitment to LINE. One male head explained that '…*had an outdoor childhood and had two children who lived outdoors during their learning period'* and commented how he wanted to provide this opportunity for children in his school.

- **Use of green space**

Investment in and use of green spaces was a proxy for the value that schools placed on LINE: One teacher commented that '*Getting that outdoor environment is so important'* because the school were providing outdoor experiences new to their children: *'and if they don't have* [that] *range of sensory type experiences, then they are not going to develop the language that is necessary to developing their academic achievement.'*

Staff often reported during case-study visits that they were fortunate with the quality and extent of the school grounds, but stated a desire to make more of them. Several case-study schools took the opportunity of school grounds development to integrate LINE into practice. One school was going through major outdoor re-landscaping with the intention of introducing a distinct LINE element to school practice. Staff took that opportunity to turn the front of the school into a '*growing frontage'*, in part to make their entrance more obvious and mask unsightly bins, but more generally to transform an uninspiring grey space into a number of inviting areas.

KEQ 26. What new practices in LINE did teachers and schools develop?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element encourages practices to become embedded
KEQ 26. What new practices in LINE did teachers and schools develop? Based on evidence from: **26.1** Hub leaders? **26.2** Beacon school action plans? **26.3** Case-study school reports?	
Data sources Hub leader interviews, beacon school LINE action plans, school case studies	

Key points
• Hub leaders and schools reported a variety of new LINE practices that involved
  o the regularity of LINE practice
  o staff management in relation to LINE
  o curriculum activities
  o resource development
  o grounds development
  o collaborative projects
  o creative projects.	

26.1 What new practices in LINE did teachers and schools develop, based on evidence from hub leaders?

Hub leader interviews were largely concerned with project delivery within their hubs and, although all reported on developments within project schools, there was relatively little focus on the detail of school LINE delivery. However they occasionally reported on some new practices during the course of the project:

- One Bristol school blended their LINE work with that of a heritage schools project. They focused all their LINE and heritage School work on Year 2 and *'saturated'* their curriculum with everyday opportunities for learning outside, for example through geographical investigations or examining woodland habitats or archaeological sites. The aim was to ensure that LINE became embedded in the Year 2 curriculum as part of the children's everyday experience. Year 2 was selected through its existing focus for its heritage work and the teacher's willingness to engage with the Natural Connections project.
- One school in Cornwall introduced LINE gradually, first giving staff the opportunity to work outdoors without any specific curricular objectives; the aim was to develop their confidence and *'general skill levels to lay a foundation'* for more specific curricular learning. Hub leaders commented that they thought the model was *'very effective'*;

the school *'have almost 100% of staff on board as they have all been out and done things that weren't judged against very tight curricular objectives, and they now feel comfortable'* with LINE.

- In their exit interview, Cornwall hub leaders commented that some schools were embedding a practice whereby teachers were obliged to share their *'outdoor learning which is a little bit different to what everybody else is doing'.* Other schools were building LINE into their performance management reviews. Hub leaders reported a wide spectrum of LINE activity in the hub; at one extreme *'we have extended experiences of outdoor learning, like beach days … that have informed half a term's work'*, and at the other, *'we've got teachers now who are quite happy just to take kids out for ten minutes because they know that experience and what they can do outside will really enhance learning back in the classroom. And you know, taking kids out for ten minutes is quite an organisational chore actually, but they think it is worth it, yeah. And I'm seeing more and more of that'.*

- One North Somerset school had a range of LINE facilities and used these to offer a programme of CPD and training to other schools. The school had plans to develop their facilities further, and to offer resources such as bicycles and climbing equipment for hire.

- Three Plymouth schools collaborated around the regeneration of a local Nature Reserve, with the aim of improving both the site and the educational opportunities it could afford.

- One Torbay school developed a 'Horticultural Hit Squad' of volunteers, who worked with children to develop their knowledge and understanding of growing; the school development plan included the statement that 'all pupils are seen as gardeners'.

26.2 What new practices in LINE did teachers and schools develop, based on evidence from beacon school action plans?

We were provided with copies of action plans from 13 schools in four hubs (Bristol, Cornwall, Plymouth and Torbay). Each provided a systematic overview of plans to raise awareness of LINE throughout the school, to ensure the grounds and facilities enabled LINE, and then to develop and embed LINE into regular curricular and non-curricular activities. Notable planned practices that were new to these schools included:

- Development **of grounds and facilities** to enhance LINE:
  - o Creating an Edible Site by replacing all their school planting with edible plants.
  - o Composting kitchen waste as a step towards becoming a 'Sustainable School'.
  - o Building a kiln and bread oven, so that children could make pottery and bread.

- o Planting grass banks as natural flowering meadows, with plants chosen for their colour and to encourage wildlife.
- o Establishing a Key Stage 2 'Ministry of Mud' mud kitchen for mathematical exploration and to extend pupils' mathematical vocabulary and understanding.
- o Carrying out a 'movement' research project with Year 5 pupils to find out which areas of the playground were currently not in use and should be developed.

- **Collaborative projects**:
  - o A primary school created a 'hedgehog project' and a wildlife garden with students from a local secondary school's Duke of Edinburgh group.
  - o A primary school worked with a group of secondary students from the design and technology department to build sheds, and with students from the maths department to build a maths trail.
  - o One primary school developed the animal collection already established (chinchilla, tarantula, guinea pigs and chickens), and set up a rotation of animals between local schools to ensure that the children could see a range of creatures.
  - o The LINE lead in a primary school worked with one pupil year group to investigate and demonstrate what was possible through LINE, particularly in relation to writing and maths. The aim was to produce 'How To …' guides and provide CPD for all year group teachers in the cluster.

- **Creative projects**:
  - o Entering a film about orchards into a competition organised by the local theatre.
  - o Setting up a ring of tents for story-telling sessions
  - o Each class designing and making a large-scale musical instrument outside, linking to sounds in science
  - o Each class preparing and using resources to support teaching and learning outside. Some resources stayed in situ outside.
  - o Ensuring that there were a range of clubs specifically aimed at engaging children with the natural environment, such as the 'chicken' or 'nuts about nature' clubs.

- **Other projects**:
  - o Zoo club – groups of children visited Dartmoor zoo after school once a week.
  - o Arranging a 'donate your wellies' campaign
  - o Linking outdoor learning week with National Science and Engineering Week.

26.3 What new practices in LINE did teachers and schools develop, based on evidence from case-study school reports?

In the final section of this KEQ we illustrate new or developing practices from case-study schools. We reiterate that although some schools had just begun to engage with LINE, others had established LINE practices before they joined the project, and it was not always a straightforward process to separate 'new practices' from those that were more deep-rooted. In addition we illustrated case-study schools' creative LINE practices in KEQ 6, and discussed patterns of curricular and non-curricular use of LINE in KEQ 19. For this KEQ we have therefore selected those practices developed in the recent past or developing at the time of the case-study visit that we have not mentioned in other KEQs.

Special Schools

- One teacher in a special school with a strong interest in the therapeutic value of animals for children with attachment difficulties worked with the Thrive[24] group. The aim was to create opportunities for children to develop relationships with rabbits and chickens on the school site, and with other animals on regular visits to a local farm. The rationale behind this was that children have a natural attraction to animals, and that they learn to externalise their feelings through the animals; this helps them to reach a better understanding of themselves. The teacher described the powerful effect of animals on one pupil, whose *'presentation was always sullen, quite depressed, never saw him smile. But put him on the end of a lead with one of the dogs and he'd laugh, he'd giggle, he'd skip, he'd run about, and you saw a totally different side to the child'.*

- When the headteacher at one special school appointed a LINE lead to implement a skills-based approach to learning outside (in which he fostered skills such as balance and coordination through riding bicycles, for instance), there was some tension between the LINE lead and other teachers; they did not understand the aims of the LINE lessons and saw only the reduced amount of curricular time they had with the students. The headteacher's solution was a *'transformative initiative'* in which he employed TAs to attend the LINE sessions and act as the link between learning outside and inside. TAs subsequently reported to classroom teachers on events and developments outside, and provided a consistent reference point for pupils when they move between inside and outside.

Infant Schools

- Several project schools had initiated themed days such as 'Wellie Wednesday' or 'Fab Friday'. In one infant school the headteacher wanted to get away from the *'interactive whiteboard'* that *'often dominates'* and has introduced 'no-electricity' days as a way of encouraging teachers to go outside. This eco-friendly approach could also be seen in the school's plans to redevelop the pond area (for wildlife studies)

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[24] See https://www.thriveapproach.co.uk/

and to build a solar dome that will *'lend itself'* to creative arts and music, *'so the school can use the outdoors for a wider range'* of activities.

Junior Schools

- The headteacher in one school spoke of his plans to develop the grounds so that they included ideas and reflection points. He reported that staff often started lessons with questions such as, 'When a tree falls in the wood, does it make a sound?', and he wanted pupils to be able to encounter and think about these questions independently outside.

Primary Schools

- One teacher at a primary school decided to try LINE for the first time when teaching about the fire of London. After the children had built model houses, the class took them outside to burn in the fire pit. While the fire was burning, children made and cooked bread and toasted marshmallows, and then used the charcoal left in the pit to draw pictures. The pupils did not record any of this on paper but, when they returned to the classroom, they were able to explain what they had done with the different materials, what changed with the heat and how the fire had spread; the teacher reported that *'all of a sudden their learning was a bit more real'.* The teacher planned to undertake more LINE activities following the success of this one.
- One primary school placed a strong emphasis on teaching lifelong skills such as collaboration and team working; in this school pupils learned to accept the variety of roles within groups and understood that they would play different roles at different times. The headteacher reported that this approach was enhanced by working outdoors, first because many tasks were group-based and secondly because there was more space in which to discuss tasks and roles; teachers were less likely to intervene because noise levels were too high, which meant that the activity was likely to be child-led. This approach was enhanced by the school farm, which provided a wide range of opportunities for activities outside.
- As part of the process for preparing for a local art-based competition, one primary school started with a class trip on the river. An artist parent volunteer worked with the children to record and sketch their thoughts, feelings and memories about the trip. When they returned to the classroom, the children brainstormed their thoughts, looked for common themes and started to develop the pieces of art to be submitted; they made pictures and sculptures, wrote poems and stories, hid *'little treasures'* in shells, collected and painted stones, and made an 'edible river' cake. They won the competition!
- One primary school invested in a yurt shortly before the case-study visit. Teachers had been using it as an outdoor classroom, but there were plans to develop its use further and to encourage other schools to enhance their outdoor learning by using the yurt as a resource. The aim was to ensure that the yurt became an integral of the school's bookable resources, as were the library, grounds, hall and spare classrooms.

- The Year 4 teacher in one primary school regularly led overnight camps on the school fields with Years 4 and 5, and arranged group trips onto Dartmoor. This year he was also given dedicated time to take a group of Year 5 children out of class every two weeks on outdoor learning activities such as orienteering and practical sessions on how to use equipment, focusing particularly on children experiencing greater socioeconomic disadvantage. The sessions were aimed at widening the children's experiences, raising their self-esteem and building resilience, and culminated in a 'Mini Five Tor challenge' programme with an overnight camping trip on Dartmoor.

- One primary school was in the final stages of planning an 'experience passport' for the next academic year at the time of the case-study visit. Similar to the National Trust's '101 things to do before you are 11¾', the plans were for the passport to include a number of music, heritage and outdoor experiences that children should do before leaving the school; activities such as walking to the city centre, walking over Clifton Suspension Bridge, building a shelter and planting food-growing crops.

- A teacher in one school attended a local woodland day where children were undertaking a fairy hunt, in which the organiser had placed doors on trees and told stories about the fairies. As the children in her class had been struggling to come up with innovative or imaginative ideas for their writing, she took this idea back to her school; she put a fairy door on a school tree, placed some fairy tools on the ground and sprinkled some glitter over them. The children were entranced, and the teacher commented that they *were so wrapped up with the story of we're going on a fairy hunt and looking for the clues. And there were some berries 'What might they eat?' 'Who might live behind the door?' 'What would the character be like?' … Their imaginations were just lit up by that experience! So then we talked about it, they dramatised the characters that would live behind the door and then when we came back into the classroom they had so many ideas … that their work started to become original'.*

Community Colleges
- The modern foreign languages (MFL) department from this college used a 'collapsed curriculum' day to focus on festivals from around the world. Students were given the task to develop a new festival based on Earth, Air, Fire or Water, and had to collect their ideas and materials for their festival from the outdoors. This was the first time that teachers from MFL had been outside; they reported that the day was *'really good'* and felt that it should be developed further in future years. Teachers noticed that *'students were seeing practical uses for their language skills … they were seeing that link between what they were doing in the classroom and real life'.*

- One Rights Respecting College organised a 'respect' day in the autumn. The whole of Year 9 were blindfolded while a former Royal Marine member of staff who had been lost at sea for three days recounted his experience, which included finding a log that saved their lives. The whole story was told outside in the dark and cold to provide a *'more real'* experience. Students then wrote about how the combination of

the story and the environment in which it had been told had made them feel. Teacher interviewees described the experience as *'very powerful'.*

KEQ 27. What factors were important in supporting changes in LINE activity?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element encourages practices to become embedded
KEQ 27. What factors were important in supporting changes to LINE activity?	
Data sources	
School case studies, hub leader interviews, school baseline survey, July 2014 school survey, July 2015 school survey	
Key Points	
• A number of key factors were identified as underpinning increases in LINE activity, including: o active support of the headteacher and senior leadership team for LINE o change of culture toward LINE o introduction or development of a strong LINE lead o increased levels of LINE-related continuing professional development o greater use of school grounds for LINE activities	
NOTES	
Direct quotations from school case-study interviews *'are in italics and inverted commas'*	

This KEQ draws on qualitative data to explore a range of factors that were seen to contribute to the increase in LINE activity identified in KEQ 1 and 2.

What factors were important in supporting changes to LINE activity?

- **Active support of headteacher and school senior leadership team**

The active support of the headteacher and SLT was instrumental in enabling the factors discussed below of culture change, appointment of a strong LINE lead, increased LINE CPD and greater use of school grounds for LINE. We present two contrasting examples to illustrate the point.

In one primary school, interviewed staff reported on the enthusiasm for LINE displayed by the headteacher, and they commented that they were actively encouraged to use the natural world for their teaching. Although staff recognised that their confidence around LINE was not high, they were keen to try new outdoor activities and could articulate the benefits of LINE for their pupils; they reported that the head '*really motivated*' staff to think about the possibilities of LINE in their teaching.

In one contrasting case-study school, the headteacher and SLT supported LINE through joining the project and appointing a LINE lead, but did not actively support the LINE lead's

work in developing LINE throughout the school. In this school LINE activity and practice were largely undertaken in Reception and Key Stage 1 and, at the time of the case-study visit, had not become part of a whole-school approach.

- **Change of culture toward LINE**

Whereas all case-study schools reported overall positive attitudes toward LINE by staff at the time of the case-study visits, a number of schools revealed there had been a change in culture since LINE had first been introduced. In some cases, this change had taken several years before LINE was seen as a whole-school approach that had reached a '*critical tipping point in the staffroom when the majority of staff become enthused and sold on the benefits of outdoor learning'*. In some case-study schools such a point had been reached following delivery of high quality CPD that closely reflected the school's own needs and resources. One hub leader argued that once staff had a greater understanding of how to use the school's physical environment, they became much more creative in using LINE for curriculum delivery. Part of this was ensuring that staff understood and appreciated the benefits of LINE, as they could then engage students more fully with LINE. The Bristol hub leader made the point that effective LINE should be a shared responsibility to enable a whole-school approach: '*Most of them* [schools in the hub] *have very much taken on board the idea … of LINE being something that is taken on as a whole school and woven through the curriculum and that isn't just one person's responsibility'.*

Although a number of schools typically started their LINE journey with separated Forest School-type provision and occasional dedicated outdoor learning days, many case-study schools soon started attempting to integrate LINE into the curriculum on a whole-school basis. One interviewee commented, for example, that: '*We don't separate it* [LINE]. *I never wanted that. I wanted it to be part of what we do. It's innate. So, whatever subject you're teaching, "Can you do it outside?"'.* Whole-school cultural adoption of LINE can also be evidenced from school policies and development plans: '*The positive culture is reflected in the school's policies and processes.* [Our] *3 year overview fully incorporates LINE into the environmental development plan, which was devised from input from all staff across both schools. The resultant action plan is built into the curriculum'.* Explicit inclusion of LINE in school development plans is more likely to lead to longer-term embodiment and offer a clear commitment to staff, pupils and parents.

Figure 27.1 below illustrates the positive change in school staff's attitude to LINE reported between the school baseline and July 2015 school survey. 89 per cent of schools indicated a 'very positive' or 'positive' staff attitude towards delivering the curriculum through LINE in July 2015 compared to 72 per cent in the school baseline survey, a 17 percentage point increase.
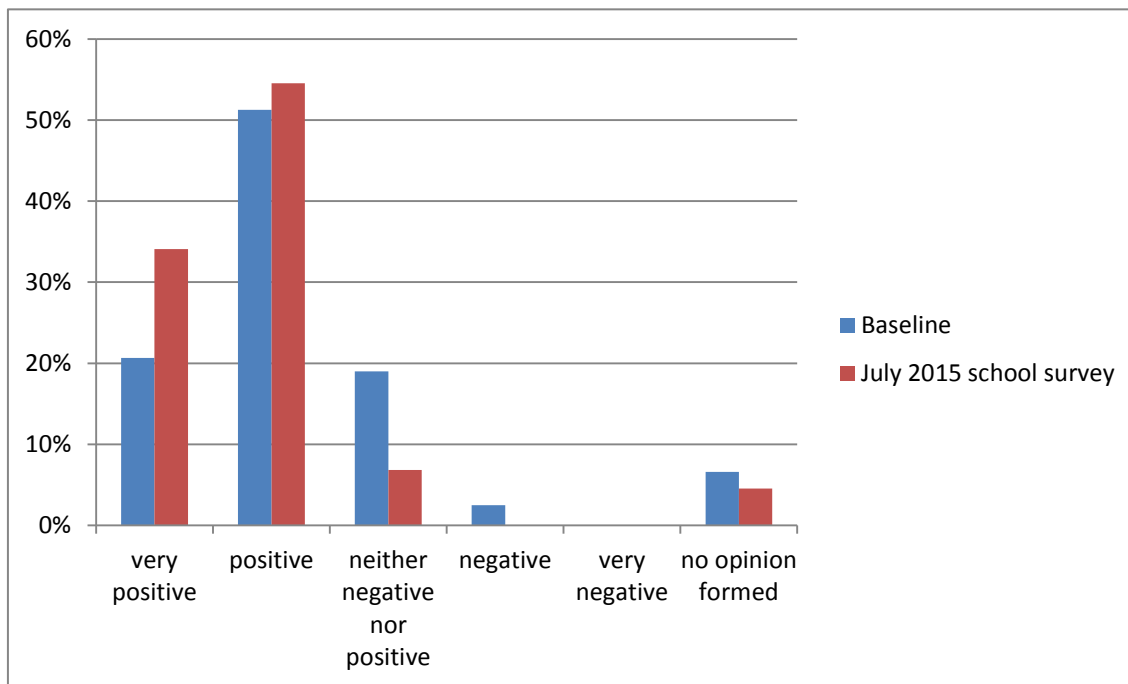
Baseline n= 112, July 2015 n=88

Figure 27.1: School staff's attitude towards delivering the curriculum through LINE

- **Introduction or development of a strong LINE lead**

The case-study data revealed many references to the key role played by nominated LINE leads in fostering a wider understanding of the benefits of LINE to pupils, and maintaining an enthusiasm and commitment to using LINE across staff structures. LINE leads were often given this explicit designation as part of the Natural Connections project. A number of these individuals were 'natural' choices for the role due to their relevant training (e.g. Forest School) and their outdoor learning skills, but other, often less experienced staff, were offered the opportunity of assuming the role, with its added responsibilities, as a professional development strategy. LINE leads then had a mandate to use staff meetings, allocated CPD slots, and resources to introduce and disseminate good LINE practices across schools: one interviewee illustrated this by commenting that '[The LINE lead] *has staff meeting time given to her for LINE sessions … [She] has also introduced LINE across all staff planning … [It was] felt this model has worked well and there does appear to be whole-school buy in'.* In some cases, however, the LINE lead was a TA, and the evidence from case-study visits and hub leader interviews suggests that TAs generally found it more difficult to influence staff than LINE leads who were teachers.

Useful attributes of effective LINE leads included enthusiasm for LINE, keenness to identify new ideas, knowledge of how to apply ideas to curriculum delivery, and organisational skills (for example, for coordinating whole-school activities).

- **Increased LINE-related CPD**

The case study reports revealed that CPD was an important factor underlying an increase in teacher involvement with LINE (see also KEQs 1, 2, 5, 9, 10, 11, 12, 17, 19, 23, 26 and 29).

KEQs 1 and 2 showed that LINE-related CPD increased across all schools from 55 to 67 per cent during the project period.

CPD was delivered by both internal and external experts. Internally, LINE leads often proved to be drivers of change, providing examples of good practice in connecting LINE to the curriculum, sometimes leading by example within their own subject areas before encouraging wider dissemination of successful activities across other disciplines.

The majority of case-study schools acknowledged that senior leader support for staff to undertake LINE-related CPD was a key issue in developing LINE across schools generally, and that resultant CPD opportunities represented a major strategy for overcoming the frequently cited challenge of 'lack of time' to implement LINE within teaching practices (KEQ 23). Despite frequent references to constraints and competing financial demands, there were many examples of funding released for staff to attend LINE CPD, often for Forest School training, particularly where this was seen to positively impact on pupils and generate internal expertise. This therefore provided longer-term financial benefits to the school by reducing their dependence on external provision. One school interviewee commented that: '*Staff are very positive about outdoor learning. A lot of money has been spent on it and expertise has been built up.* [The LINE leads] *have run a number of CPD meetings at the end of school days, and have trained other school staff in Forest School skills'.* Such a build-up of LINE expertise also started to have an impact beyond the case-study schools themselves, and there was some evidence of cluster-wide CPD activities being developed.

Where external providers were used for CPD, good quality provision could lead to transformational experiences for individuals, in relation to increased confidence and generation of ideas, and for schools, in terms of procuring useful resources and green space development. These engagements were often pivotal to subsequent increases in the use of LINE by teaching staff.

- **Greater use of school grounds for LINE**

KEQs 1 and 2 showed that there was an increase in the use of green spaces across all schools over the course of the project, particularly for garden, wildlife, and other natural spaces within school grounds. As was the case for CPD, the case-study data also suggest that senior leaders were committed to green space development in order to accommodate LINE activities, including allocating increased levels of funding to finance improvement and expansion plans. For example, one school reported the following changes to its school grounds since the start of the project:

  o Improvements to a woodland area on the edge of the school site to make it more useable for lessons.
  o Development of a space behind the art block; 'the learning hollow area' that was used for tutor lessons, discussion, and art work
  o Peace garden by the entrance using ideas generated by pupils

- New planned canopy and outdoor table tennis tables in place of the old swimming pool area
- Allotment area
- Marshy area by sports courts used for creative writing. Area has also had habitat improvements such as bug hotels
- Planting of 32 trees with the Woodland Trust and local council.

In many cases such senior leader support enabled more collaborative and creative planning for green space development by staff and parents. In one example, a school interviewee reported that: '*This* [enormous field] *wasn't previously being used a great deal ... discussions* [with the Parent Teacher Friends' Association] *turned to the outdoor space, with simple ideas being suggested just to get the children outside. The ideas subsequently got bigger and bigger - a pond, a growing space, a greenhouse and so on. The children were really excited about these proposals and came up with their own ideas, as did interested staff'.*

In a number of cases, the focus moved on from the provision of additional green spaces to how spaces could be used more effectively by observing wildlife, using areas for cooking, sowing seeds and building bug hotels. A graduated approach to developing space allowed staff to assess the use of different spaces before seeking investment in further ideas. This was particularly relevant for those schools with more limited land and space.

Many of the case-study schools reported that green spaces were enhanced through a mix of school funding for resources and external expertise, PTFA funding from fundraising activities, volunteer time and expertise, and parent contributions, the latter utilising both generic and specific skills.

KEQ 28. What roles did the various parts of the Natural Connections model play in supporting LINE within and between hubs?

Project element and objective	Assumption
Brokerage: Stimulate demand for LINE activities in schools	The brokerage element encourages practices to become embedded
KEQ 28. What roles did the various parts of the Natural Connections model play in supporting LINE within and between hubs? **28.1** Central team **28.2** Hub leaders **28.3** Web service **28.4** Summary	
Data sources Central team instruments, hub leader interviews, web service data.	
Key points • The location of the Bristol and North Somerset hubs meant that they were able to work together more closely than the other hubs. • The web service element of the project, although successful in project promotion, appeared to have had limited impact on project delivery at hub and inter-hub levels. • The Bristol and North Somerset Wild Time for Schools app was developed towards the end of the project. Hub leaders anticipated high levels of traffic to the app in due course, and reported that it was too early to gauge its impact on LINE delivery. • Linking local delivery to a national website is likely to continue to be problematic. A local model such as the Wild Time for Schools app could provide a focus for LINE delivery in that area, although the cost and effort involved in setting up and maintaining the app should be considered in terms of the amount it is used.	

In KEQ 15 we described the cascade model of project delivery in detail, and in KEQs 3, 7, 12, 14, 16, 23, 24 we examined different aspects of the hub leader models, summarising the information into tabular form in KEQ 20. Each of these KEQs was related to the different parts that the cascaded model played within individual hubs. In this KEQ, therefore, we investigate the roles that the different parts of the model played in supporting LINE between hubs.

28.1 Central team

In KEQ 15 we demonstrated the different responsibilities of the project central team, and discussed the successes and challenges of the project delivery model. Briefly put, the role of the central team was to:
- support LINE within hubs

- support LINE between hubs where possible
- develop a local and national profile for the project.

The following sections discuss the extent to which the central team has fulfilled this role in relation to supporting LINE between hubs.

28.2 Hub leaders

The central team's role in this context was to facilitate inter-hub communication and cooperation, so that hub leaders could learn from each other and, if they wished, could develop joint projects and/or approaches as Natural Connections progressed. The central team set up hub leader meetings every six months during the project as both the central team and hub leaders decided that quarterly meetings would be too frequent; given the resources available for the project, it was felt that hub leaders' time would be better spent recruiting schools and supporting LINE within the hubs. To support wider engagement with LINE, the central team set up a hub leader bulletin in late 2013 that aimed to inform hub leaders of relevant local opportunities. Hub leaders reported that they appreciated both the information and the format of these bulletins, which were organised by relevance to each hub, were short and with further information easily accessible.

At the first hub leader meeting held by the central team, all hub leaders were given each other's' contact details so that they could discuss aspects of the project; this was regarded as quicker and more efficient than routing all communication through the central team. We understand from conversations with hub leaders that there was some inter-hub communication; when appointed hub leader in November 2014, Mel Easter attended hub leader meetings in Plymouth to investigate the possibility of taking the model to Torbay; RIO spoke to Plymouth hub leaders at the start of the project to discuss their models; members of the Cornwall hub leader team came to meetings in Plymouth. These were all informal meetings and discussions that did not involve the central team and so we have limited understanding of their content and/or impact; we do know, however, that this contact was limited because of the lack of hub leader capacity. In her exit interview Mel Easter commented that she would have appreciated a wider network of support from other hub leaders and that more *'cross-hub fertilisation'* would have been helpful; this suggests the potential for inter-hub collaboration in future delivery models, provided there are adequate resources and capacity to support this type of work.

The strongest example of inter-hub working was the development of the Bristol / North Somerset joint hub, in which the complementary skills and knowledge of the two hub leaders who worked in close proximity combined to make a sustainable model of LINE delivery over a wide geographical area (see KEQs 3, 15, 20, 24). In collaboration with their project schools, both hubs invested in the Wild Time for Schools App with the aim of meeting local LINE school needs; hub leaders from Plymouth and Cornwall expressed interest in

encouraging schools to use the app. Apart from this interest, the remaining three hubs had other factors that hindered further collaborative work; the Plymouth team was not permitted to work beyond the boundaries of the City Council; Torbay was some distance from all the other hubs; the Cornwall hub leaders were already covering an extensive area.

28.3 Web service

Only one element of the project was intended specifically to create an overarching participant community, although this was not necessarily directly related to the Natural Connections project and had the potential to involve both national and international participants. The focus for this community was planned to be the Growing Schools website, but this was relatively quickly dismissed by the hub leaders as inadequate and played little part in project development. Countryside Classrooms website was set up partly in response to these experiences, but we have no access to site statistics and are unable to report on the nature of the website traffic.

As part of the drive to promote the project locally and more widely, the central team established the project Twitter account in October 2013 which currently has approximately 1,800 followers (February 2106), and typically receives between 15-20,000 impressions[25] per month; this suggests the development of a secure project identity and interest in the work of the project, both from those involved and others outside the project area. Further evidence of interest can also be seen in the project newsletter, which by the end of the project had a distribution list of 1,589 people, predominantly in the south-west of England.

The project blog has also contributed to the development of broader online recognition of the project. The aim was to build on the collaborative model developed through Natural Connections, and to raise awareness of examples of both high-quality evidence and delivery in the field of outdoor learning rather than to promote one project, organisation or school. It was launched in March 2015, and by February 2016 we had posted 21 guest blog posts from 18 bloggers. The blog has had 5,600 page views from 2,600 visitors from 26 countries, with 70 per cent of these visits from the UK (February 2016). The Twitter account and the blog have therefore contributed towards a national and international online community of people who are aware of, interested in and supportive of the Natural Connections project. Limited project data from hub leaders and schools in this area, however, means that we have little understanding of the way in which these accounts directly supported the development of LINE in project schools, either within or between hubs. The Bristol and North Somerset Wild Time for Schools app was developed towards the end of the project and, although hub leaders anticipated high levels of traffic to the app in due course, reported that it was too early to gauge its impact on LINE delivery during the Natural Connections project.

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[25] Impressions: Times a user is served a Tweet in timeline or search results (www.twitter.com)

28.4 Summary

We described in KEQ 15 how hub leaders focused their attention on the immediate priorities of school recruitment and support, and how they had little capacity for other aspects of the project. From this KEQ we can see how, apart from in the Bristol and North Somerset hub collaboration, this also applied to developing formal and informal networks of inter-hub collaboration to supporting LINE between hubs. This KEQ also shows how the web service element of the project, although successful in project promotion, appears to have had limited impact on project delivery at hub and inter-hub levels.

A critical success of the project has been to enable a secure foundation of LINE practice in schools in five hubs in the south-west of England; hub leaders have tested their individual models and are currently developing wider and sustainable models of LINE practice in their area. This security in their approach and the widening of their ambition (particularly in the Bristol/North Somerset hub) has opened up the possibility for central team leadership to support inter-hub collaboration in a new phase of project development. In addition, and as we suggest above, future delivery should include extra capacity for collaborative learning across the project to model the hub-level collaboration that was valued highly by project school staff (see KEQs 18, 24, 29).

Linking local delivery to a national website is likely to continue to be problematic; the project evidence showed that schools used those websites that they found helpful, and that very few teachers were prepared to find the time/capacity to upload resources onto a website. The local app devised by the Bristol and North Somerset hub, however, could provide a focus for LINE delivery in that area, although the cost and effort involved in setting up and maintaining the app should be considered in terms of the amount it is used.

KEQ 29. What was the role of CPD?

Project element and objective	Assumption
Brokerage: Support schools in building LINE into their planning and practices	The brokerage element encourages practices to become embedded
Key Measure	
Monitor levels of school engagement with continuing professional development (CPD)	
KEQ 29. What was the role of CPD?	
29.1 How is CPD represented across the KEQs?	
29.2 What types of CPD were attended by school staff?	
29.3 What was the role of CPD in the Natural Connections project?	
Information Sources	
School baseline, July 2014 school survey, July 2015 school survey, hub leader interviews, school case studies	
Key Points	
CPD was central to delivery of the Natural Connections project. Its role was to support school staff in: • Developing staff knowledge, understanding and practice of LINE. • Giving staff confidence in the efficacy of LINE, thereby supporting their 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.	
NOTES	
In this KEQ we summarise relevant information from KEQs 5, 7, 11, 12, 14, 16, 17, 18, 22, and 24 and discuss the role of CPD in the Natural Connections project. Survey comments are shown 'in inverted commas' and interview quotations *'in italics and inverted commas'.*	

29.1 How is CPD represented across the KEQs?

In this section we provide a brief summary of information relating to CPD as the foundation for the discussion in section 2. Key points are shown from each relevant KEQ.

- KEQ 5 showed that there was a **statistically significant increase** in the proportion of project schools in which staff and/or volunteers undertook LINE-related CPD (from 55 to 67 per cent; p-value=0.05).
- KEQ 7 reported that hub leaders saw CPD as a key factor in developing LINE as a **means to school improvement**. They argued that the CPD offer should be flexible and tailored to schools' changing needs as their LINE understanding and practice developed.

- In KEQ 11 we demonstrated that the subset of 25 schools that completed the baseline, July 2014 and July 2015 school surveys showed **sustained demand** for LINE-related CPD to improve knowledge, understanding and quality of LINE practice across the school.
- KEQ 12 revealed school case-study interviewees' views that CPD was an **essential component to embedding LINE practice** in schools because it built staff confidence, understanding and expertise. One interviewee commented that LINE practice was *'something which is really quite radically different'* to *'the normal'* teaching practice; the logical conclusion was that teachers needed training to be able to work with the different kinds of pedagogy involved.
- In KEQ 14 we reported on hub leader models of promoting, delivering and brokering CPD in their hubs. All offered both formal (organised sessions delivered by LINE experts) and informal (network meetings and/or the opportunity for informal discussions) CPD. While the response to formal CPD offered/brokered by hub leaders varied, all reported that **schools valued the informal CPD** provided by networking meetings that allowed attendees to share knowledge and practice with like-minded colleagues.
- KEQ 16 discussed schools' levels of satisfaction with the assessment of their LINE needs. Mirroring the point made in KEQ 14 above, cited survey responses showed **high levels of satisfaction** from some schools with the **formal and informal CPD** provided/brokered by hub leaders.
- In KEQ 17 we reported on school aspirations for LINE. It was possible to see a broad pattern of engagement with LINE in which schools first, understood the value of LINE; second, increased levels of LINE activity; and third, aimed to increase the regularity of LINE activity to embed its practice across the school. This sequence would necessarily be **underpinned by wide-ranging forms of CPD**, delivered in-house or externally. One survey comment illustrated the point in the school's aspiration 'to continue to provide teachers with ideas for outdoor learning in curriculum lessons'.
- KEQ 18 examined school satisfaction rates with the project in overcoming their challenges to LINE. Once again the survey comments demonstrated that responding schools valued opportunities for formal and informal CPD through **networking, providing curricular links to LINE and giving staff confidence** in their LINE practice.
- KEQ 22 showed that 70 per cent of schools who reported undertaking CPD stated that their **CPD needs had been met**, particularly through informal networking meetings and visits to each other's' sites. Survey respondents cited lack of time as the main barrier to attending CPD sessions.
- KEQ 24 discussed hub leader support models for project schools. Hub leaders emphasised how schools' CPD needs changed over time and were dependent on their in-house LINE development, changing school priorities and current local/national policy demands. CPD, either delivered informally through school visits, telephone conversations and network meetings or organised into formal sessions or

offered through online support, was **central to all models**. Case-study schools reported that shifting a school's culture towards one in which staff embraced LINE (see KEQ 23) was the key challenge, and that networking and training were seen as the key ways in which to raise the profile of LINE and give LINE practitioners in schools the confidence to encourage other staff to get involved. One case-study school interviewee summed up the general view when he commented that collaborating, networking and sharing best practice (all informal types of CPD) were beneficial to all involved: *'Just the very fact of being able to look outward and work with … other schools and get ideas from other schools and to be able to exchange ideas and exchange experiences with other teachers, I think is a massive benefit'*.

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!'*.

29.3 What was the role of CPD in the Natural Connections project?

The evidence presented above demonstrates the centrality of CPD to the Natural Connections project. The statistically significant increase in the proportion of project schools that reported undertaking CPD, and the sustained demand for CPD reported by the subset of 25 schools (KEQ 11), show that schools regarded CPD as an important contributor to high-quality LINE delivery. School survey returns and case-study visits confirm these views, demonstrating high levels of demand for CPD and high levels of satisfaction with the offer.

Similarly, the centrality of CPD to hub leader support models, and hub leaders' view that CPD was a key factor in developing LINE for school improvement, demonstrate the key role that CPD has played in the project. In summary, its role has been to support school staff in:

- Developing staff knowledge, understanding and practice of LINE.
- Giving staff confidence in the efficacy of LINE, thereby supporting their efforts to embed LINE and to shift the school teaching and learning culture to one that embraces LINE.
- Addressing practical challenges such as funding, grounds development and health and safety requirements.

KEQ 30. Did the supply of LINE services to schools increase?

Project element and objective	Assumption
Brokerage: Stimulate supply of LINE services for schools that meet their needs	In order to meet increased demand the brokerage element will facilitate an increased supply of LINE services

KEQ 30. Did the supply of LINE services to schools increase?
30.1 Was there a change in schools' engagement with LINE providers • From the schools' perspective? • From the LINE providers' perspective? **30.2** What were the LINE providers' views on school demand for their services?

Data sources
School baseline survey, July 2015 school surveys, initial LINE provider survey, Autumn 2015 LINE provider survey

Key points
• The data yields no clear picture of whether the supply of LINE services to schools increased overall. • A few LINE providers reported seeing an increase in demand for some of their services, including CPD and development work.

NOTES
In this KEQ we use information from school surveys and LINE provider surveys to examine whether demand from schools changed over the course of the Natural Connections project. LINE provider survey returns were relatively small (46 from the initial survey and 37 from the Autumn 2015 survey), from a wide range of organisations and individuals. The data should therefore be treated with caution when drawing conclusions about trends in provision of LINE provider services. Survey comments are reported 'in inverted commas'. See KEQ 14 for more information on schools' work with LINE providers.

30.1 Was there a change in schools' engagement with LINE providers?

• From the schools' perspective

Figure 30.1 below shows that across the project, schools reported a slight drop in levels of working with LINE providers from 59 to 56 per cent between the baseline and July 2015 school surveys. The difference was not significant (p-value=0.844). Bristol schools recorded the highest levels of working with LINE providers at baseline and in July 2015 (72 and 76 per cent respectively), while Torbay reported a decrease of 28 percentage points over the two

surveys and recorded the lowest hub level engagement with LINE providers in July 2015 (33 per cent).

- **From the LINE providers' perspective**

Figure 30.2 below shows that individual LINE providers reported working with broadly similar numbers of schools over the lifetime of the project. The most noticeable changes were:

- o an increase in the percentage of LINE providers working with 10-50 schools (from 35 per cent to 46 per cent).
- o a decrease in the percentage of providers working with fewer than 10 schools (from 35 per cent to 27 per cent).
- o a decrease in the percentage of providers working with 101-200 schools (from 15 per cent to eight percent).
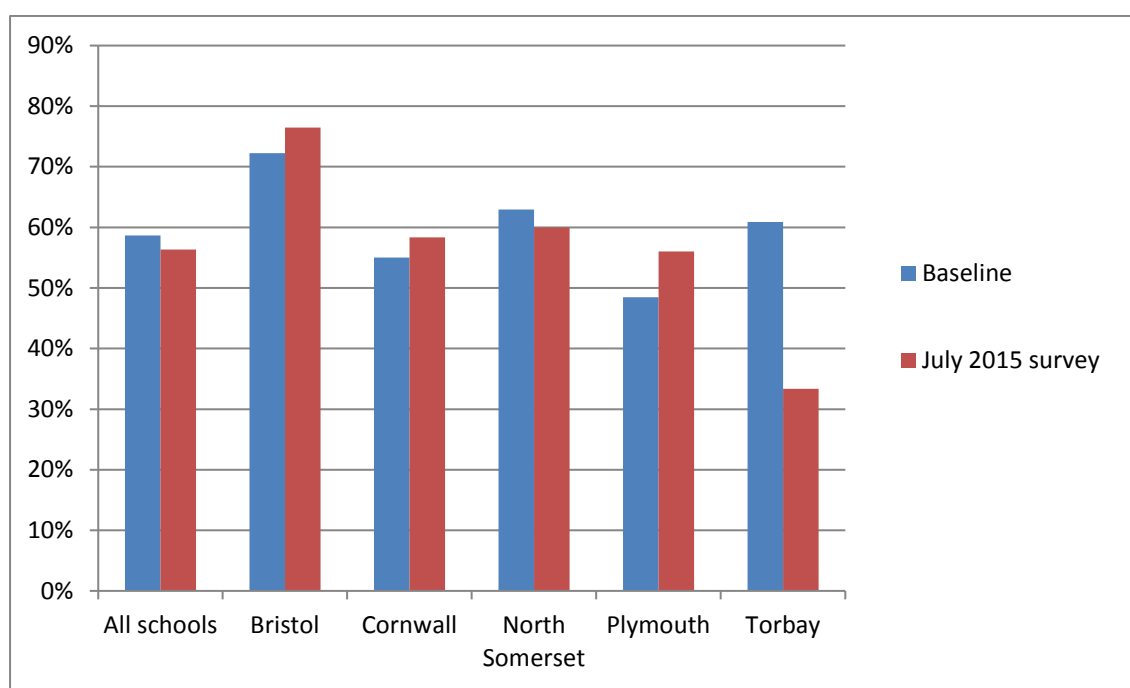
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 school survey n=87: Bristol n=17, Cornwall n=12, North Somerset n=15, Plymouth n=25, Torbay n=18
Figure 30.1: Project- and hub-level school engagement with LINE providers
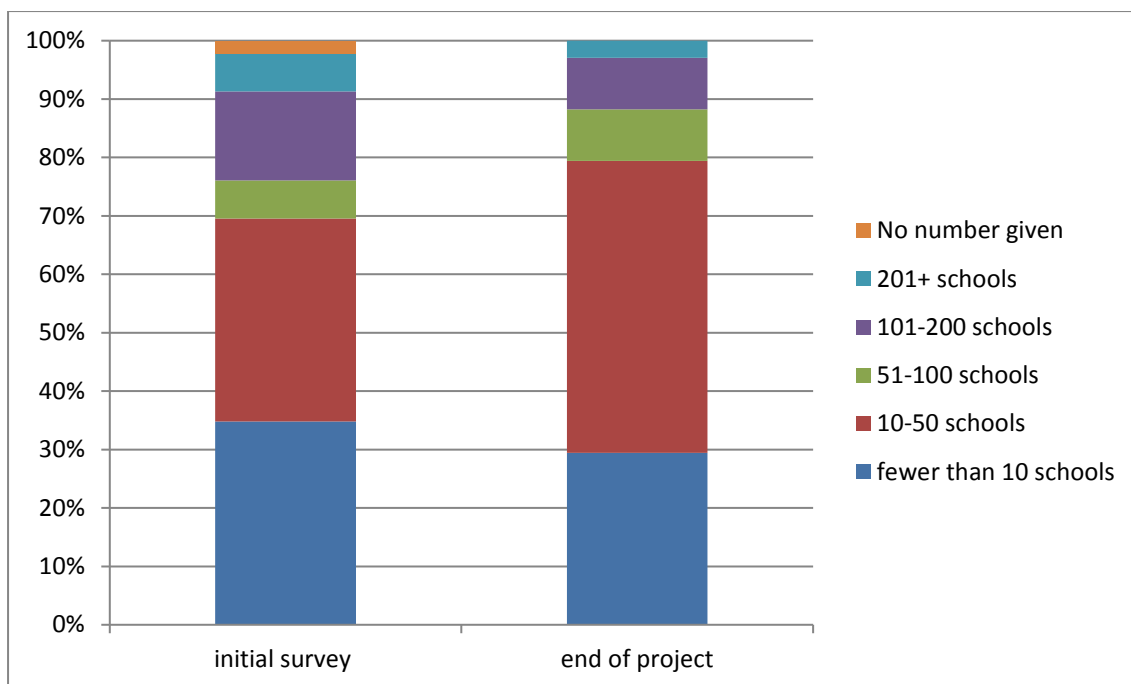
Figure 30.2: Number of schools that LINE providers have worked with in the year previous to completing the survey

30.2 What were the LINE providers' views on school demand for their services?

The 37 LINE provider respondents to the Autumn 2015 survey were representing their organisations and/or themselves as individuals. Some businesses operated at an international, national or regional level and others purely at a local level. Five respondents reported working with the central team; seven reported working with one or more hub leaders; 24 attended project events; six worked with a project school and eight reported that they had not been involved with Natural Connections. Responding LINE providers also offered a wide range of services that were school-based (23 respondents) and centre-based (19), and included continuing professional development (CPD) or other training (16), consultancy (10) or accreditation (4). Respondents could select more than one option, with the result that these numbers sum to more than 37. The whole presents a wide range of different types of organisation that had varying levels of engagement with the project and offered a number of different services in a variety of locations. It is for these reasons that the survey findings should be treated with caution.

In the Autumn 2015 LINE provider survey, providers were asked 'Has the demand from schools for the services you provide changed since January 2013?' 37 LINE providers responded. Of these, 17 respondents (46 per cent) indicated 'yes', 16 (43 per cent) 'no' and 4 (per cent) did not respond. 15 respondents provided further explanation for their answer, with two reporting a substantial increase in their business:

- 'My turnover has doubled nationally since 2013'.

- 'It's increased year-on-year - 1,495 children taught in 2013, 1,809 in 2014, 1,840 in 2015'.

Ten reported a gradual increase in school demand for their services; of these, seven reported an increase in demand but offered no further information, while three reported an increase in demand for services related to Forest School or grounds development. Another LINE provider reported that the nature of the work had changed in a different direction to those three:

- 'Some work there is more of, some there is less! Less forest school work, more enrichment and training'.

One more reported that staff at a local school:

- 'seem more keen since they became an academy and had free-er hand with curriculum planning'.

KEQ 31. Was there a development or change in the nature of LINE provider services delivered locally to meet school needs?

KEQ 34. Did LINE providers change their services in response to school needs?

Project element and objective	Assumptions
Brokerage: Stimulate supply of LINE services for schools that meet their needs	**For KEQ 31.** In order to meet increased demand the brokerage element will facilitate an increased supply of LINE services **For KEQ 34.** The brokerage element can support LINE providers in meeting schools' needs

KEQ 31. Was there a development or change in the nature of LINE provider services delivered locally to meet school needs?

KEQ 34. Did LINE providers change their services in response to school needs?

31.1	Was there a change in the services LINE providers delivered to schools?
31.2	Has school demand for LINE provider services changed?
31.3	Were there changes in LINE providers' working patterns?
31.4	What challenges did LINE providers experience in working with schools?

Data sources

Initial LINE provider survey, Autumn 2015 LINE provider survey, hub leader interviews

Key points

- Some LINE providers experienced both growth and changes in demand for their services; some respondents reported that they had responded positively to differing school demands.
- The findings suggest schools' shifting priorities towards school-based services.
- The survey results suggest that providers could have been more responsive to changes in school demand.
- LINE providers appeared to be moving towards flexible models of charging for services.
- LINE providers' most frequently-cited challenge to working with schools was accessing relevant staff.

NOTES

KEQs 31 and 34 have been combined as they are closely aligned.

Responses to the LINE provider surveys were limited (46 to the initial survey; 37 to the Autumn 2015 survey) and are insufficient to allow a separate, more complex analysis. The small number of responses to both surveys means that the findings of this KEQ should be viewed with caution.

See KEQ 14 for a detailed discussion on schools' engagement with LINE provider services and hub leader views on the relationships between LINE providers and schools. Survey responses are shown 'in inverted commas'.

The relatively small number of LINE provider respondents to the initial (n=46) and the Autumn 2015 (n=37) surveys were both organisational representatives and individuals; some businesses operated at an international, national or regional level and others purely at a local. Responding LINE providers also offered a wide range of services that were school-based and/or centre-based, and included CPD or other training, different types of consultancy and/or various forms of accreditation. In addition, respondents to the Autumn 2015 survey had different levels of engagement with project schools. The whole presents a picture of a wide range of different types of organisation that offered a number of different services in a variety of locations, and had varying levels of engagement with the project. It is for these reasons that the survey findings should be treated with caution.

31.1 Was there a change in the services LINE providers delivered to schools?

Providers were asked in the autumn 2015 survey whether the services they provided to schools had changed since January 2013. Sixteen (43 per cent) responded 'yes', 18 (49 per cent) indicated 'no' and there was no response from three (eight per cent).

Fourteen respondents provided more detail on their answer, and all of these reported that they were widening or changing the services they offered. Nine were directly related to the type of services they offered schools:
- 'To tie in more closely with the new National Curriculum launched in September 2014'.
- 'Updated to reflect changes in the curriculum'.
- 'Increase in number of learning providers working out of our forests, which schools can book with for led learning sessions. Downloadable lesson plans and activity ideas are available from our website for self-led visits to our forests'.
- 'I am doing more enrichment programmes'.
- 'I now provide more options with sessions'.
- 'Our schools programme changed this year to a menu based programme'.
- 'Only in the sense that we evolve with the schools we work with and prepare bespoke activities as much as possible'.
- 'More grounds development with school community'.
- 'Only just starting to work with school[s] - previously pre-school and out of school club and family groups'.

The remaining five were less specific about the type of services they offered:
- 'Constantly evolving'.

- 'The range of courses / services [we] will supply has increased'.
- 'More training and less centre based group work'.
- 'Writing and delivering more CPD delivery for national organisations'.
- 'Our site is new'.

Providers were also asked about the services they currently offered to schools, and Figure 31.1 below shows the percentage of LINE providers that were offering particular services to schools from both the initial and autumn 2015 surveys. Noteworthy changes over the project lifetime were first, that the percentage of providers offering school-based services increased from 37 to 62 per cent and the percentage offering centre-based services decreased from 63 to 51 per cent, which may be linked to the findings in KEQ14 that project schools improved school grounds for LINE. Secondly, CPD, other consultancy and accreditation services all increased, but at a lower level.
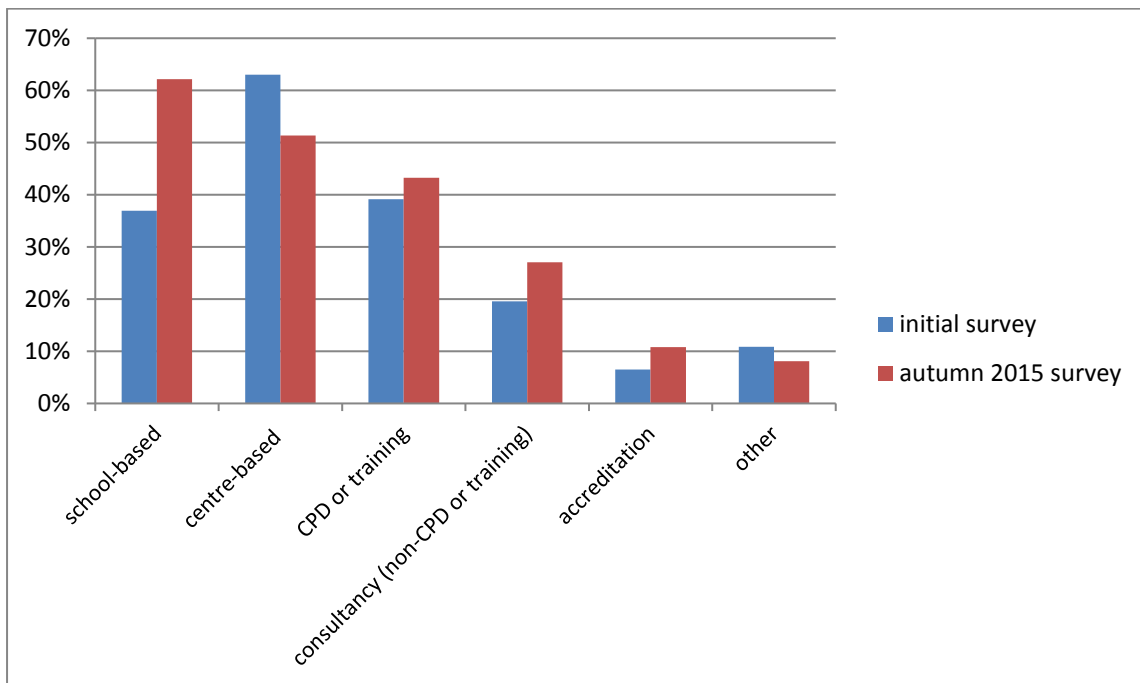
Initial survey n=46, autumn 2015 survey n=37
Figure 31.1: Percentage of LINE providers offering particular services to schools

31.2 Has school demand for LINE provider services changed?

Figure 31.2 below shows LINE providers' views on school demand for their services. Respondents reported an increase in demand for school-based services from 22 to 43 per cent, a decrease for centre-based services from 50 to 41 per cent, and an increase for CPD (15 to 41 per cent) and other consultancy (2 to 22 per cent). School demand for accreditation increased slightly from two to five per cent. Respondents offered no details on the nature of the 'other' services demanded by schools.

Figure 31.2: LINE provider views on which services are in most demand from schools

These findings were explained further through the autumn 2015 survey question 'Have the services you provide to schools changed since January 2013?'. Seventeen respondents (46 per cent) indicated 'yes', 16 (43 per cent) 'no' and 4 (11 per cent) did not respond. 15 respondents provided further explanation for their answer. Four commented on the changing nature of demand from schools:

- 'Some work there is more of, some there is less! Less forest school work, more enrichment and training'.
- 'More grounds development with school community'.
- 'Seem more keen since they became an academy and had free-er hand with curriculum planning'.
- 'Due to changes to the National Curriculum; focus on SMSC [spiritual, moral, social and cultural development] within schools, importance of Forest Schools/taking learning outside the classroom, etc.'

Three providers commented 'Increased' without any further detail, but two providers were experiencing a substantial increase in demand for their services:

- 'It's increased year-on-year - 1,495 children taught in 2013, 1,809 in 2014, 1,840 in 2015'.
- 'My turn over has doubled nationally since 2013'.

Five seemed to be experiencing both a gradual increase and shift in demand for their services:

- 'More interest in Forest School'.
- 'Our learning programme has grown during this time'.
- 'Gradually gaining momentum'.
- 'Always changing with new focus and staff'.

- 'It continues to grow through word of mouth'.

The final provider to comment on this section had recently moved and commented that the business had less local work.

Comparison between Figures 31.1 and 31.2 shows that the profile of LINE provider services offered matched that of perceived demand; **both surveys showed an increase in school-based offer/demand, a decrease in centre-based offer/demand, and an increase in offer/demand for CPD services and consultancy. Similarly, the comments above confirm that responding LINE providers were experiencing both growth to and changes in demand for their services. Taken together, these results suggest shifting priorities within schools towards school-based services, including CPD; this demand could be driving the change in offer from providers and some appeared to be responding flexibly to these new demands, including working more in partnership with schools to offer more tailored services.** The survey results also suggest, however, that other providers could be more responsive to this change.

31.3 Were there changes in LINE providers' working patterns?

LINE providers were asked in the autumn 2015 survey if the way they worked with schools had changed since January 2013. Eight providers (22 per cent) responded 'yes', 26 (70 per cent) responded 'no', and three providers gave no reply (8 per cent). The six who provided a comment all reported that they had deepened and/or broadened their work with schools:
- 'More involved with the schools as a whole'.
- 'More in depth - site specific and more curriculum / Ofsted linked'.
- 'Forest School is an addition to Curriculum linked workshops'.
- 'Changed from flexible bespoke programme to set menu'.
- 'Increase in number of learning providers working out of our forests, which schools can book with for led learning sessions. Downloadable lesson plans and activity ideas are available from our website for self-led visits to our forests'.
- 'More outreach provision due to rising transport costs'.

Providers were asked how they worked with schools and the responses are set out in Figure 31.3 below. Respondents could choose all ways of working that applied. They key point to note is that only five per cent (2 providers) of respondents had a fixed way of working with schools; 43 per cent (16 providers) had a menu of options from which schools could choose, and 57 per cent (21 providers) reported that they developed bespoke activities for schools. This again suggests that some providers are beginning to respond to schools' local LINE needs.
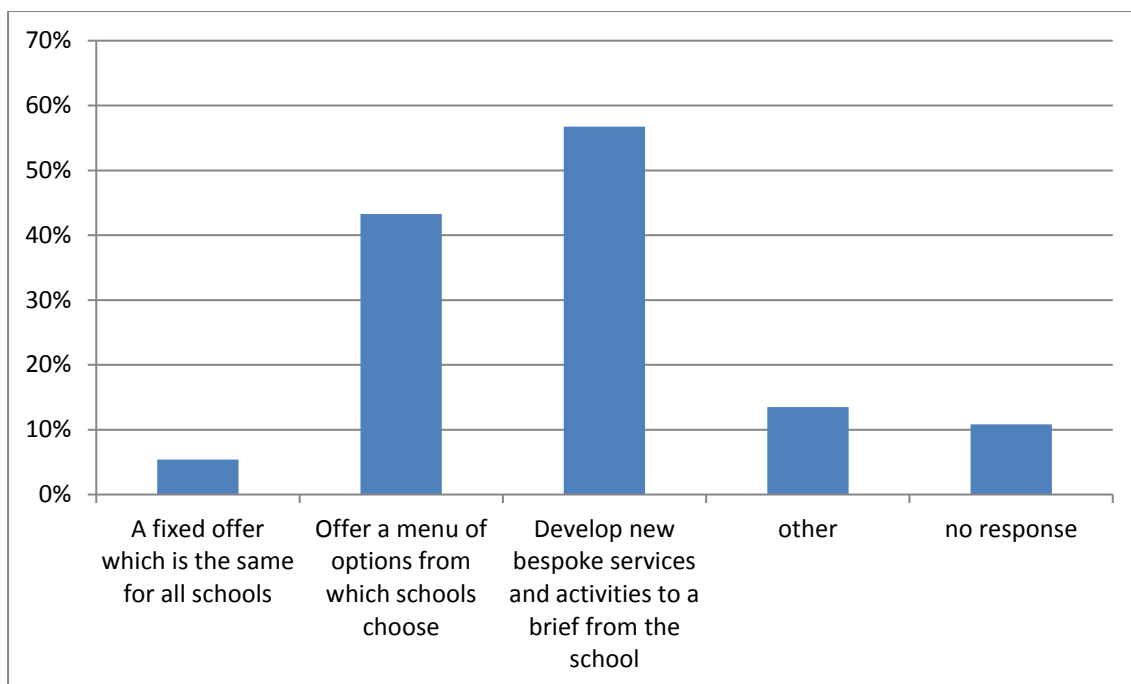
Figure 31.3: LINE provider ways of working

Providers were invited to explain their answers, and five articulated the responsive nature of their services:

- 'I deliver lottery funded projects - commissioned by env[ironmental] organisations and local authorities - to provide free workshops to schools, which reflect the themes of the client's project but also identify curriculum links to maximise the learning experience and hook the schools! I do also charge when approached by a school when I have been recommended'.
- 'Bespoke sessions for the school'.
- 'All our partners work independently of the partnership - plus we offer some training and forum days and are open to new ideas'.
- 'Tailor made visits for each school or organisation'.
- 'Generally fixed, but allowing the school to ask for bespoke needs'.

The final survey question relevant to this KEQ asked LINE providers about their charging policies. Figure 31.4 below shows changes in the charging policies of LINE providers between the initial and autumn 2015 surveys. The percentage of providers that reported that they always charged for their services increased from 24 to 30 per cent, the percentage reporting that they always provided services free decreased from 35 to 18 per cent and those reporting variable models for charging increased from 41 to 52 per cent. From these responses it appears there was a shift away from free services towards a model of charging more consistently for services provided to schools. This may reflect the harsher economic climate whereby alternative funding sources have become scarcer.
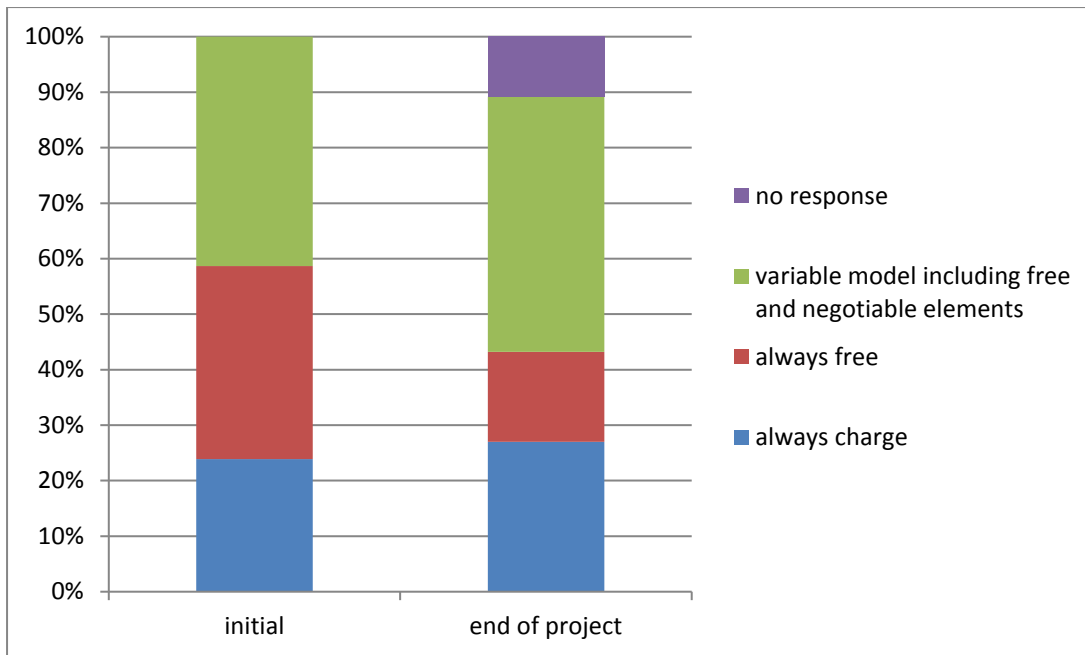
Initial survey n= 46, autumn 2015 survey n= 33
Figure 31.4: LINE provider charging polices

31.4 What challenges did LINE providers experience in working with schools?

Providers were asked in the autumn 2015 LINE provider survey to select challenge(s) that their organisation had faced in working with schools. Figure 31.5 below shows that 41 per cent of responses (15 providers) cited access to staff in schools as a challenge, 27 per cent a lack of resources (10 providers) such as time or money and 24 per cent a lack of demand from schools (9 providers). Only 3 per cent (one provider) reported no challenges. 11 per cent (4 providers) did not respond.
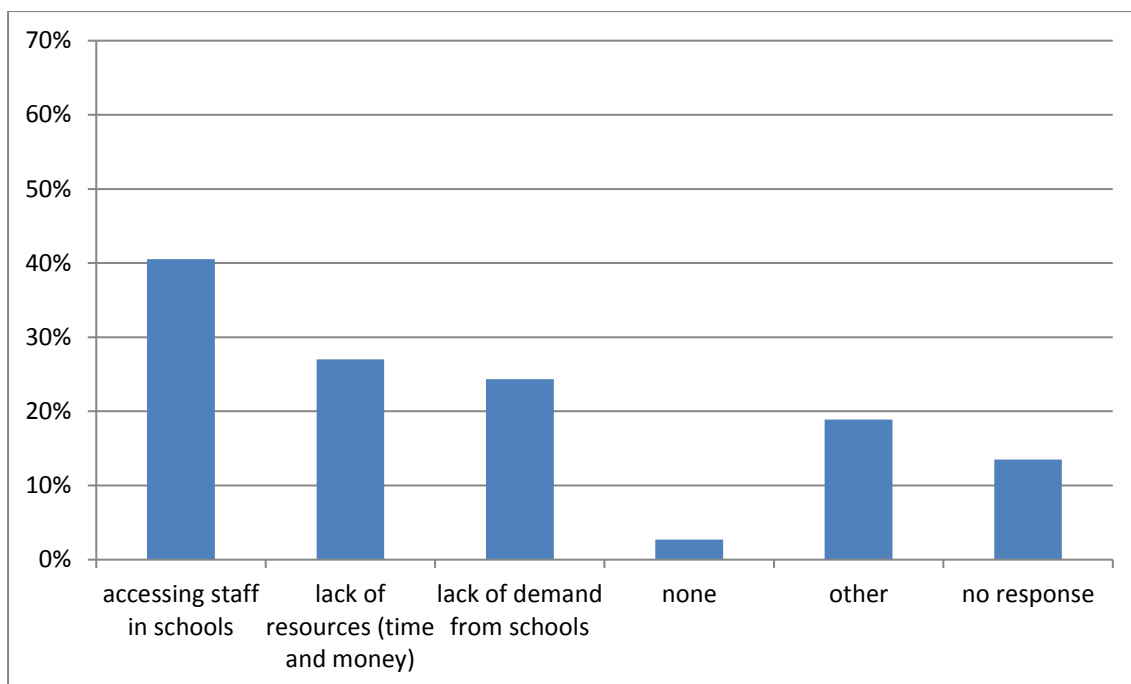
n=37

Figure 31.5: Challenges experienced by LINE providers when working with schools

Thirteen LINE providers explained their answers in more detail.

- Communication with schools was an issue for four providers, both in general terms and in their ability to contact relevant staff in schools:
  - o 'Promotion/marketing hurdles - trying to get the information to the people who need/desire it'.
  - o 'Marketing my bespoke services to the right people'.
  - o 'Poor levels of communication'.
  - o 'Awareness of services that I offer'.

- Capacity within LINE provider organisation was referenced by three providers:
  - o 'Capacity at our organisation to meet the growing need'.
  - o 'Staff are too busy to arrange outdoor learning'.
  - o 'Working abroad and further afield means less time to support local schools'.

- Capacity within schools was mentioned by two providers
  - o 'Just beginning to work- has been hard to make contact due to new headteacher'.
  - o 'Teachers seem increasingly busy and unless it fits in with their current topics impossible to involve but have to say that most schools I have worked with demonstrate that they are making use of LINE even if I personally haven't worked with other classes'.

- Two providers cited cost:

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- 'A key barrier is the cost for coaches to bring groups to us which is the largest cost, especially in comparison to the small amount of money we charge for our services'.
- 'If I had funding to offer free sessions I know I would be working every day of the week'.

- Finally, two providers reported that the Natural Connections project had made no difference to their organisations' work:
  - 'We have been involved with Natural Connections but our offer of providing CPD or putting teachers in contact with learning providers in our forests has never been taken up'.
  - 'We are outside the main areas but don't appear to have had schools coming as a result of LINE'.

KEQ 32. Did schools feel that LINE providers were meeting their needs?

Project element and objective	Assumption
Brokerage: Stimulate supply of LINE services for schools that meet their needs	In order to meet increased demand the brokerage element will facilitate an increased supply of LINE services

KEQ 32. Did schools feel that LINE providers were meeting their needs?
32.1 What mechanisms allowed schools to articulate their needs?
32.2 Did this lead to provision meeting need? What successes were there in meeting schools' needs?
32.3 What challenges were there in LINE providers meeting school needs?

Data sources
School case studies, school baseline survey, July 2014 school survey, July 2015 school survey, hub leader interviews

Key points
- School engagement with LINE providers remained fairly static over the project period   - Hubs developed their own approaches to facilitating engagement between schools and providers, including: - Network meetings (where providers were invited to present or support a workshop)   - Market place sessions (where providers and schools could meet)   - Annual conferences   - There were several broad areas of positive engagement between schools and providers where schools' LINE needs appeared to have been fully or partially met: - Provision of CPD   - Leading curriculum activities   - Provision of advice and support to school staff   - School ground improvements   - Schools' interpretation (and recording) of the roles of LINE providers and volunteers may frequently have been blurred as generic external support

NOTES
Interview comments are '*in italics and inverted commas*'
Survey comments are 'in inverted commas'
See KEQ 14 for more information on schools' work with LINE providers.
See KEQ 30 for patterns of supply of LINE provider services to schools over the project period

In this KEQ we use comments from school surveys and interviews from school case studies to examine school views of whether LINE providers met their needs and the reasons for their views. Relevant extracts from hub leader exit interviews illustrate feedback from school/LINE provider engagement.

32.1 What mechanisms allowed schools to articulate their needs?

The school baseline surveys revealed that, at the early stages of the project, schools expressed excitement about and enthusiasm for having their school grounds extended for LINE, improving teaching practices, and forging collaborative relationships with other schools and experts. As the project progressed, the school surveys showed that schools appreciated the information on LINE providers that became available through participation in the project; for example, through the provision of a LINE directory by the Natural Connections team, and word-of-mouth passing of contacts for school ground development from hub leader to beacon, or beacon to cluster schools. A teacher in a Plymouth school reported on how this could happen: *"I found that it was only through talking to* [a hub leader team member] *about random ideas he would say "Oh actually I can put you in touch with so and so because they do that sort of thing", but if I hadn't just loaded ideas on to him I wouldn't have ever known.'* Specific suggestions raised in the surveys included a request that schools be given a list of all LINE provider CPD available to them, enabling easy and direct contact; and requests for further details about outdoor education qualifications. There were also positive references to the hub meetings where opportunities arose to discuss potential LINE providers, and to meet them on the occasions where this was part of the agenda.

Sessions were held by the Natural Connections team in all five locations to introduce the project, which were well attended by LINE providers. Subsequently, further meetings were held within the hubs for LINE providers to network and to discuss how they could contribute to the Natural Connections project; these network events were also attended by hub leaders to encourage further communication. LINE providers were encouraged to establish regular meetings between themselves in order to discuss and respond to the opportunities of the Natural Connections project but no funding was available for these and they did not happen. Information to providers about the project as a whole was principally through the central team's newsletter. All the hubs developed conferences, meetings and 'market place' events to encourage and facilitate collaborative work between providers and schools. The Bristol hub leader exit interview revealed that *'all schools have fed back that it was really useful to meet providers in that informal setting.'* This suggests they have been successful to some extent in bringing together supply and demand (see KEQ 30, 31 and 34 for further information).

32.2 Did this lead to provision meeting need? What successes have there been in meeting schools' needs?

KEQ 30 shows that the school survey results presented a more uncertain picture regarding the pattern of engagement between schools and LINE providers over the course of the project, with the level remaining more or less unchanged. However, there were still several

areas of positive engagement between schools and providers where schools' LINE needs appeared to be fully or partially met:

- **LINE providers delivering Continuing Professional Development (CPD)**

Where LINE activities or CPD sessions were delivered by external providers across the south west, session evaluations showed that schools were very satisfied or satisfied with every session, bar one. One example of such provision involved an artist visiting a beacon school and 'using natural plants to create felt work. Yes, the school was charged by the artist –the service was the artist leading the class in the technique of felt work. We were very satisfied with the service and the outcome.' One cluster school's art department 'employed a sculptor, to lead willow sculpture workshops. Really, they needed a little more time, but it was a success still', and another beacon school enjoyed biannual visits from a Devon Wildlife Trust member of staff who worked with staff on development and interpretation of school grounds to make them wildlife friendly. Other types of CPD activities recorded by project schools included Forest School training, community farm visits, woodland learning, educational workshops, Teach on the Beach, school grounds gardening and maintenance, and fossil hunting. The breadth of the type of LINE providers that engaged with schools is of note, ranging from individuals with expertise to large organisations with multiple services.

- **LINE providers leading curriculum activities**

The baseline and school surveys provided an extensive list of curriculum activities led by LINE providers. Schools reported that they were 'satisfied' or 'very satisfied' with all such sessions. Types of activities included Forest School, developing school grounds for wildlife, gardening, environmental art, film making, photography, learning about deadwood habitats, woodland activities, and history. A teacher at a cluster school in Bristol related how one provider '*delivered a Stone Age survival day at Stoke Park, which we paid for. It was a great day with skills and knowledge presented to the children which we could not have done ourselves – foraging and knowledge of Stoke Park in prehistoric times',* and a Torbay cluster school recruited a provider to lead a Saxon battle re-enactment.

- **LINE providers providing advice and support to school staff**

One headteacher explained that, although he was keen for his staff to be independent in relation to LINE, he did not *'have a problem finding the expert help they need and in the recent past have had help from a specialist to build a round house on the Forest School site, a clay oven in the grounds and forest skills training with the National Trust.'* Other examples of LINE experts providing advice to schools included maximising use of school grounds, designing outdoor space, and improving outdoor learning provision.

- **Developing relationships rather than commissioning providers**

One headteacher of a beacon school spoke enthusiastically about forging good working relationships with experts, such that they often provided their services for free due largely to a shared vision for LINE in education. Examples included an Education Advisor that dropped into the school occasionally in his own time to lead outdoor activities, and a member of staff

from a local environmental organisation who planted trees in the school, then revisited to talk to the children in an assembly about the trees' progress. One rural primary had a long-standing agreement with local food suppliers that were happy to allow free visits from the children to their farms. Similarly, another school sent classes to a farm which delivered workshops through the Higher Level Stewardship educational visits scheme so that pupils were able to take back the learning into the classroom and follow up with activities, such as mini-beast hunts and sculpture projects.

Another headteacher stressed the importance of personal relationships, particularly in relation to trust and reliability: *'we have been let down by some organisations claiming that they will do things and then not.'*

It was evident from the school surveys that within some hubs there were key individuals that had a significant impact on the progress of LINE throughout the hub. For example, enthusiastic feedback from Plymouth schools frequently cited an individual (part of the hub leader team) as being influential on their organisational commitment to LINE, as well as contributing and leading LINE activities, and the Bristol hub leader described how '*we had one … provider* [a photographer] *who has ended up working with loads of our schools …* [it's] *just down to the kind of person he is.'* In the North Somerset hub leader exit interview, the biggest success for the hub was deemed to be the sustained facilitation of a LINE beacon/cluster school network by Wiltshire Wildlife Trust, to the extent that this role has now been embedded within the trust's ongoing work.

32.3 What challenges were there to LINE providers meeting school needs?

The school surveys asked those schools that were not using LINE providers to indicate the main reasons for this from a list of options. Figures 32.1 and 32.2 show a reduction in the percentage of schools being unaware of local LINE providers from 52 per cent to 23 per cent over the project period. Only the Cornwall hub saw no change in awareness during this time. Cost remained an obstacle to many schools, although the percentage of schools expressing this as a challenge stayed relatively stable from baseline to the 2015 survey. The percentage of schools that cited pressure of time as a constraint to using LINE providers, on the other hand, increased from 19 per cent to 35 per cent, across all schools.
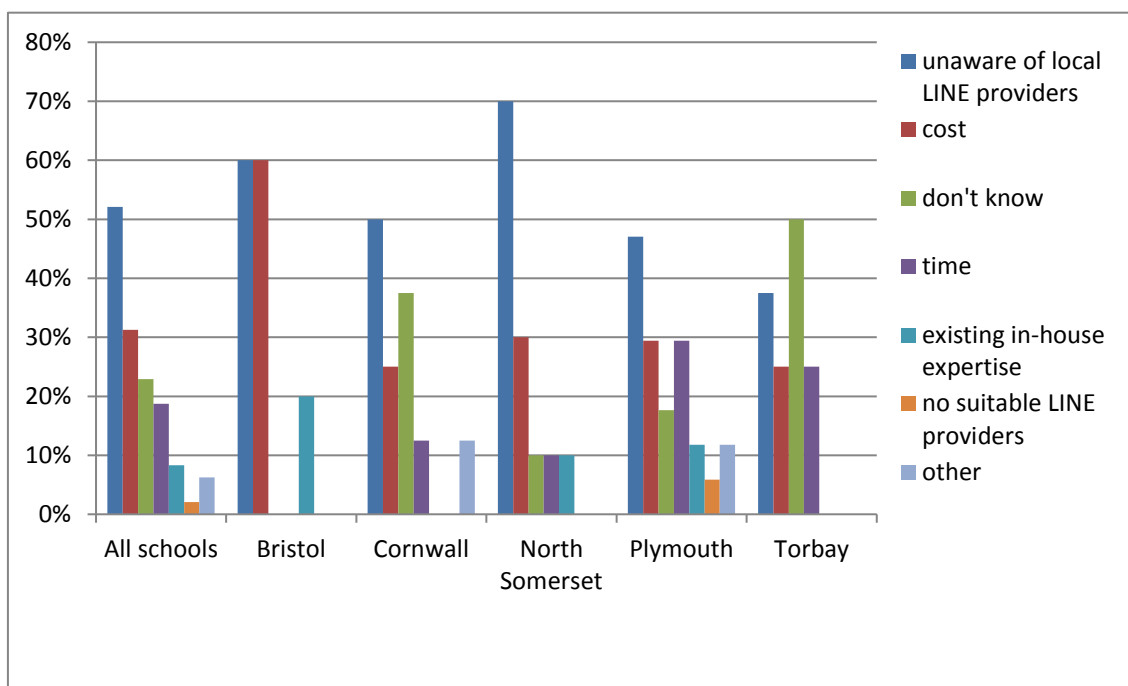
All schools n=73. Bristol n=5, Cornwall n=8, North Somerset n=10, Plymouth n=17, Torbay n=8
Figure 32.1: Reasons for schools not using LINE providers (from baseline survey)
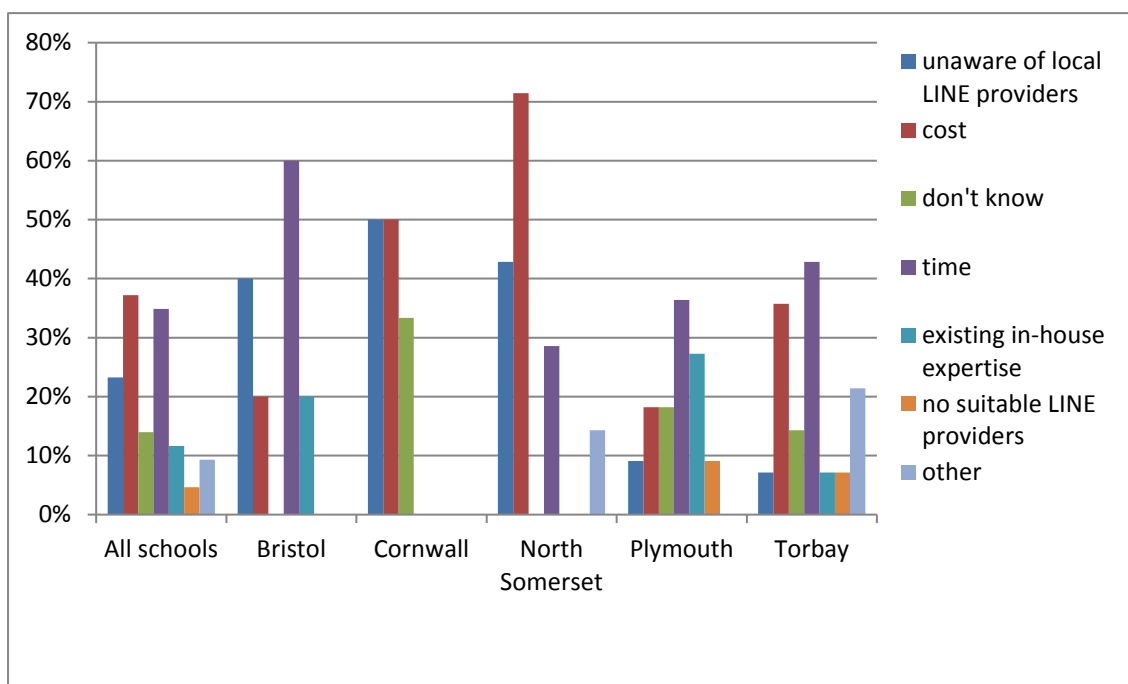
All schools n=43. Bristol n=5, Cornwall n=6, North Somerset n=7, Plymouth n=11, Torbay n=14
Figure 32.2: Reasons for schools not using LINE providers (from July 2015 school survey)

Perhaps surprisingly, when taking case-study feedback into consideration, these figures show only a very small increase in the percentage of schools not using LINE providers due to greater use of their own in-house experts. Evidence from the case studies suggests that a number of schools believed that staff had developed sufficient expertise '*to take the next steps in getting outside for learning more*'; in some cases there were enough dedicated skilled staff that '*the teachers had no need to call on external LINE providers.*' To one LINE

lead, buying-in LINE providers to deliver particular parts of the curriculum, as opposed to training existing teaching staff, made little sense: '*the teacher has the knowledge because they are the teacher, they might not have the confidence or skills to operate in an outdoor environment but they have got the academic knowledge otherwise they wouldn't be a teacher.*' It might have been expected, therefore, that this became a more significant reason for schools not to engage with LINE providers by the third year of the project.

A further insight into a lack of greater provider-school engagement was given by the Cornwall hub leader during the exit interview where it was suggested that *'in the case of private providers in particular, a focus on pupils' experiences rather than upon staff development created a dependency culture which is both undesirable and unsustainable. This is not entirely the fault of the providers. More emphasis should have been placed upon provider training in order for them to have played a more prominent role in the project.'* Focusing providers more on working with school staff to develop their skills rather than on delivery of activities to/for pupils could potentially have led to a more collaborative approach to skill and knowledge enhancement, and might have offered a more attractive 'selling point' to schools in general, and to senior leadership teams specifically.

- **Providers and/or volunteers?**

When exploring the sources of data for evidence of engagement between schools and LINE providers it was apparent that many references in the case studies and survey responses blurred the distinctions between providers and volunteers. Schools did not always differentiate between the two, and in reporting for the project, it is possible that providers were under-recorded as a result. For example, one school reported having **'a number of** regular volunteers including [a local artist] *who has helped the school with the River Dart project over the last few years. She works on speech and language with the school but volunteers her artistic expertise'.* The same school also classified a landscape gardener that helped with development projects as a volunteer, not a provider. In a further example, a school had worked with a volunteer team that was co-ordinated by a former employee of Duchy College who had helped over the years with pond creation, and farm management and development. From the survey responses to questions about LINE provider engagement, there were a number of responses that cite very similar examples of free support and activities as those discussed previously. In other words, schools might inconsistently report the role of the visiting expert as LINE provider *or* as volunteer.

The summary of KEQs 44-64 includes a comment by the Cornwall hub leader which suggests that some schools in that county regard both the management of volunteers and the management of LINE providers in the same way – that although external support may bring opportunities, it can also involve staff in additional management compared to in-house provision.

KEQ 33. Did LINE providers feel that the project supported them in understanding schools' needs better?

Project element and objective	Assumption
Brokerage: Stimulate supply of LINE services for schools that meet their needs	The brokerage element can support LINE providers in meeting schools' needs
KEQ 33. Did LINE providers feel that the project supported them in understanding schools' needs better?	
Data sources	
Autumn 2015 LINE provider survey	
Key points • The project did support some providers to understand schools' needs better, but this was not consistent across providers. Both schools and LINE providers needed time in which to develop an understanding of each others' approaches and organisations. • Providers valued the opportunities that the project gave them to network with schools. • The evaluation provided more information about the needs of schools and how they were engaging with LINE, which was thought to be helpful in shaping providers' future offer to schools.	
NOTES This KEQ was answered by one direct question in the autumn 2015 LINE provider survey. The number of survey returns was small (37 from c.250 invitations to participate), and responding organisations were diverse in terms of size, remit and operational areas. Findings should therefore be treated with caution. Survey responses are shown 'in inverted commas' See KEQ 14 for more information on school work with LINE providers.	

Did LINE providers feel that the project supported them in understanding schools' needs better?

In order to support LINE providers and link them to schools, LINE provider network meetings were facilitated early in the project by the central team in all hubs. Meetings in all hubs were open and invitations were sent to all known providers. The aim of these meetings was to develop greater understanding of providers' needs and to help them better understand school needs. These provider network meetings did not continue as standalone meetings, however, and Bristol hub leaders initially ran three or four provider network meetings to which teachers were invited; these were separate to the beacon school network meetings, but very few teachers attended. As a consequence, when Bristol created the 'Collaboration' in Spring 2014, they rolled all meetings into one network. From late 2013 onwards three hubs invited providers to their school network meetings (Bristol, Cornwall and Plymouth), while Torbay invited selected providers to selected meetings, depending on the topic under

discussion. Throughout the project Cornwall linked providers directly with schools when requested.

The central team ran a LINE provider CPD survey in the autumn term of 2013 to gain greater understanding of provider training needs. This informed the project LINE CPD action plan, and providers were able to access training sessions that included 'LINE and the new curriculum' and 'fundraising for LINE'.

In the autumn of 2015 approximately 250 LINE providers were sent a follow-up survey to ascertain their views on their role in the project; 37 organisations responded. An important question was 'Do you feel that the Natural Connections project is supporting you to understand schools' needs better?' Figure 1.1 below shows that 24 per cent (nine responses) of respondents to this question reported that the project was supporting them to understand schools' needs better, 35 per cent reported the project was not supporting them to do this (13 responses) and 41 per cent (15 responses) were not sure. Even when we take the small sample size and its wide geographical area into account, we can see that, although some providers have benefitted from the project, overall the project may not have supported LINE providers effectively in developing a greater understanding of schools' needs. KEQs 31 and 34 examine some of the reasons behind this finding.
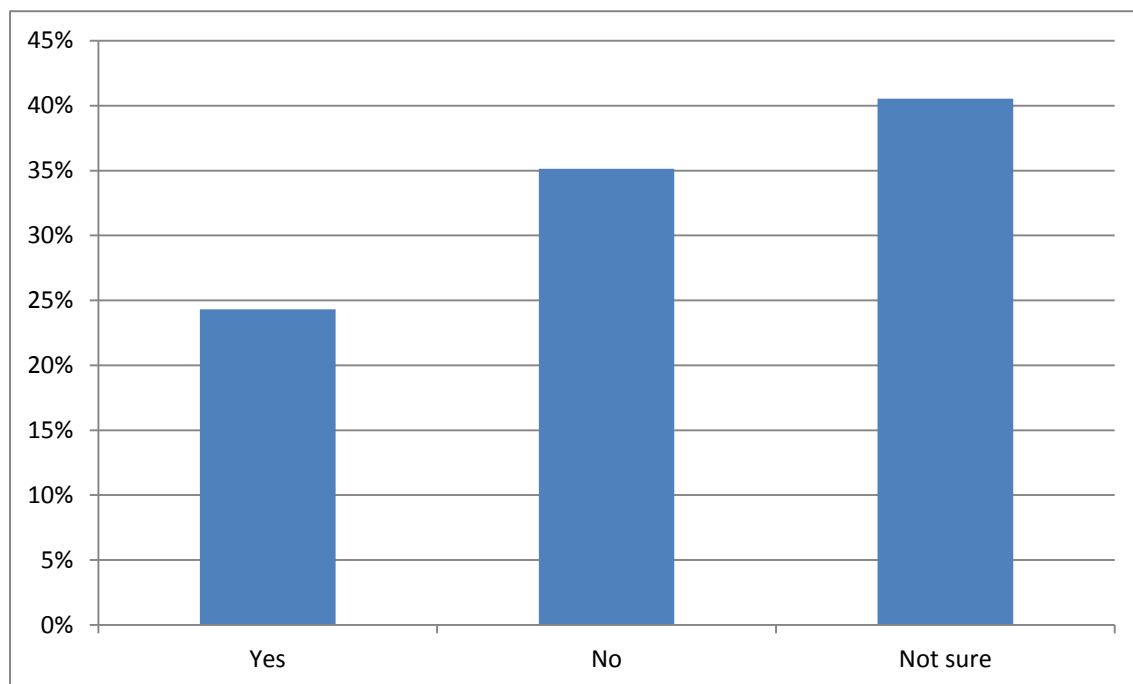
n=37

Figure 33.1: Percentage of LINE providers reporting that the Natural Connections project supported them to understand schools' needs better (Autumn 2015 LINE provider survey)

Respondents to this question were asked to explain their answers. Three providers who answered 'yes' provided explanations, two of which show examples of the project brokerage element working effectively in supporting LINE providers to understand school systems and requirements:

- 'I realise what constraints there are in terms of management, bureaucracy, curriculum, crowd control and training that stops teachers from getting outdoors, more often than they do now'. (Devon)
- 'Especially when you have the opportunity to meet teachers from the schools via network meetings organised by the hub leaders, and find out their curriculum needs, hear about what outdoor learning opportunities they are currently utilising, and the possible barriers they face with providing outdoor learning opportunities for their pupils'. (Cornwall, Plymouth and Devon area)

The third was an enthusiastic response to work that had been done:
- 'I am excited by the amount of work that has been done already to reach schools with Outdoor Learning that fits the curriculum'. (Cornwall)

Six providers who answered 'no' provided explanations. One showed interest in the project and what it potentially had to offer:
- 'I work largely in Gloucestershire and South Gloucestershire, so would like more insight into schools' needs in these areas. Generic information provided has been quite useful'. (Gloucestershire and South Gloucestershire)

Others showed a sense of frustration that Natural Connections had no impact on their work:
- 'Have several years' experience prior to NC project on delivery of outdoor learning projects in natural environments - including a school mentoring project in Bristol 3 years ago which focused on working with teachers to facilitate outdoor learning which included identifying and lifting barriers preventing engagement' (Bristol, N Somerset, Plymouth, Torbay, Devon, Dorset, Somerset, S Gloucestershire)
- 'I can't think of any way in which it has'. (North Devon)
- 'Apart from a course I accessed for CPD, I have had no other input from the project'. (Wiltshire)
- 'NC peripheral to what we do, but there may be lessons of principle to be learnt'. (Cornwall, Plymouth, Devon)
- 'We already work very closely with schools and have stayed up to date with needs within them'. (Plymouth, Torbay, Devon)

Eight providers who answered 'not sure' provided explanations. One was supportive from afar:
- 'I'm really a keen supporter from the outside rather than in the hub! Also I'm based in Scotland so our curriculum and national expectations are different. So I'm interested in Natural Connections in terms of an English-based project that is exploring similar approaches to OL and empowering schools'. (International)

Five reported that they had not been able to engage with the project or project schools for different reasons:

- 'I feel that although we work in a similar field we have not really - ironically! - connected up effectively yet although we have talked to staff and hub leaders' (Devon)
- 'We are very keen to offer support to schools with growing and food based outdoor projects but I'm not sure that has been picked up on or if there is just a lack of schools in that stream' (Bristol)
- 'Attended workshops but these weren't well attended by schools' (Bristol)
- 'Not had any involvement or been kept updated with Natural Connections yet'. (Devon)
- 'Because we were not in a target area, we didn't really engage' (Somerset)

The remaining two believed that the project had not affected their own practice:
- 'I think that the NC project has helped to raise awareness of learning in natural environment and helped schools to achieve this but not sure whether I'm any clearer on school needs in relationship to my business than I was before'. (National)
- 'I feel that I understand schools' needs well, but that there is an under appreciation of the need to adopt a strategic approach to the improvement of outdoor play from most agencies including the schools themselves'. (Bristol, Cornwall, North Somerset, Plymouth, Torbay, national).

KEQ 35. Was delivery in line with planned milestones? Was the recruitment / project structure in line with the planned time and budget?

KEQ 36. What were the successes / challenges?

KEQ 37. What were the risks?

Project element and objective	Assumption
Brokerage: Project deliverables	The brokerage element was delivered in line with planned milestones
KEQ 35, 36 and 37 are covered by the overarching structure set out below **35.1** Project structure, elements and contribution to project **35.2** Was delivery in line with planned milestones? **35.3** Brokerage: successes / challenges / risks **35.4** Volunteering: successes / challenges / risks **35.5** Web service: successes / challenges / risks **35.6** Evaluation: successes / challenges / risks	
Data sources Project team minutes, project board reports, project risk register, project publicity log, project in-kind contributions log, project audience engagement log, project milestones document	
Key points • In this developmental demonstration project, milestones shifted in the light of learning throughout the project. Key milestones for the project were the recruitment of five hub leaders and 25 beacon schools to enable project roll out, establishment of an evaluation framework and reviews of elements such as volunteering and the web-service in response to evidence. • Volunteers proved not to be as critical to the successful embedding of LINE in schools as anticipated, and their deployment during early stages of the development of LINE added complexity for hub-leaders and schools. In addition schools did not always recognise which people (such as parents who offered regular help) 'counted' as volunteers. Nonetheless 325 volunteers were recorded, achieving the target of 200-500 volunteers. See volunteering KEQ for more details. • Recruitment of 125 schools was achieved compared to an original target of 200 by June 2014. Recruiting schools was a longer and more time-consuming process than expected. • The national website was unsuccessful. A regional approach to LINE development would be better supported by lighter touch methods such as social media, blogs and locally grown WordPress sites with greater participant ownership. • Local evaluation could be appropriate for future roll out to increase its relevance to specific school priorities. This could be supported by the development of a set of common tools and support for schools using and analysing them.	

- Notable successes included an increase of LINE activity in schools across pupils and teachers, additional hub development, substantial financial and in-kind contributions to the project, removing challenges to LINE in schools, promotion and dissemination of the project, and a robust evaluation.

NOTES

These three KEQs are closely interlinked, and so are examined together. The delivery of the project elements of volunteering, web service and evaluation against milestones are not discussed elsewhere so they are covered in this KEQ which looks at the delivery, risks, challenges and successes across the project as a whole

Project challenges and successes were recorded in the minutes of regular project team and management meetings during the course of the project. Risks were recorded in the project risk register, in fortnightly project management calls and in project board reports. In this section, we draw out the themes relating to project challenges and risks.

35.1 Project structure, elements and their contribution to the project

Evidence[26] commissioned to inform the Natural Connections Demonstration Project identified that the fundamental challenges to LINE in schools were local and revolved around a lack of teacher confidence in teaching outside and fragmentation of LINE service provision. These underpinned the more traditionally cited challenges of curriculum pressures, concern about risks and cost. This and other evidence was used by Natural England and a wide range of partner organisations to shape the design of the demonstration project. The project was funded by the Department for the Environment, Food and Rural Affairs (DEFRA), Natural England and Historic England, commissioned by Natural England, and delivered in South West England by Plymouth University.

Natural Connections was intended to:
- Stimulate the demand from schools and teachers for learning outside the classroom in the local natural environment.
- Support schools and teachers to build learning outside the classroom in the local natural environment into their planning and practices.
- Stimulate the supply of high quality learning outside the classroom in the natural environment services for schools and teachers.

125 schools were recruited and contributed to the evaluation. A further 65 schools took part in the project but did not contribute to project evaluation. Across the 125 schools, the project engaged with:
- 2,531 teachers
- 2,492 teaching assistants

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[26] Dillon, J. & Dickie, I. (2012). *Learning in the Natural Environment: Review of social and economic benefits and barriers.* Natural England Commissioned Reports, Number 092.

- 40,434 students.

Schools most likely to engage with LINE displayed strong leadership and were open-minded about trying new approaches. Size of school, Ofsted grading, percentage of pupils with special educational needs (SEN) or eligibility for free school meals (FSM) did not relate to whether schools were more or less likely to engage with LINE. The ability to recruit schools from a wide set of circumstances confirmed a key project assumption that there is a latent demand for LINE among the school population. The 125 project schools consisted of 106 primary, nine secondary, eight special and two all-through schools (primary and secondary).

The distributed model was successful in recruiting schools to the project, supporting them to deliver LINE, and testing sustainable models of LINE delivery. A collaborative, partnership approach was fundamental to project success and brought considerable added value at all levels.

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 developed and broadened their LINE practice. **A pattern emerged in school survey comments in which schools: first, understood the benefits to pupils and teachers; second, increased levels of LINE activity; and third, increased the regularity of LINE activity and embedded LINE practice across the school.**

The project had four required elements. These are set out in the table below alongside the overarching aims of each, the extent to which they were achieved and how essential they were to the project success.

Table 35.1: Project element, aims and success

Project Element	Aim of element?	To what extent have they been achieved?
Brokerage. See KEQs 1-34 for full details	Work with 200 schools in areas of high multiple deprivation so that LINE becomes embedded, with pupils accessing the benefits.	125 schools were recruited and contributed to the evaluation. A further 65 schools took part in the project but did not contribute to project evaluation. Across the 125 schools, the project engaged with: • 2,531 teachers • 2,492 teaching assistants • 40,434 students. The profile of the Natural Connections school sample was broadly similar to the national picture in terms of size, Ofsted grading, number of pupils with special

		education needs (SEN), and eligibility for free school meals (FSM). Within this however, there was a wide variety of circumstances.
		There were no characteristics that made it more or less likely that schools would engage with LINE, but hub leaders did report that schools were most likely to engage with LINE if they had; senior leadership buy-in, confident, knowledgeable and enthusiastic LINE leadership and open-minded staff.
		Positive impacts were consistently reported for pupils and teachers by schools.
Volunteer development programme. See volunteering KEQ (KEQs 44-64) for full details	Test the role that volunteers can play in supporting and enabling LINE.	Volunteering culture in project schools was not well developed and it was clear that school engagement with different types of volunteering was not always consistently recognised or reported as volunteering.
		Over the project period schools reported a marked drop in the total numbers of volunteers involved in schools. However the data also shows a significant increase in the proportion of volunteers reported by schools who were involved in LINE over that time.
		Most schools did not feel they had the staff capacity or confidence to undertake volunteer management and coordination.
Web service. See web service KEQ (KEQs 65-92) for full details	Support the brokerage by signposting and enabling better use of existing assets and resources, and by creating an online community of LINE practitioners.	Hub leaders, schools and LINE providers all raised concerns about the ability of the Growing Schools website to meet project needs.
		However the project confirmed the need for a broad web service strategy that

| | | was responsive to support school needs.

Collaborative development of online resources, designed *by* local LINE practitioners *for* local LINE practitioners emerged as the most likely ways to support delivery. Low-cost, responsive social media such as Twitter and blogs were useful for disseminating information. |
|---|---|---|
| **Evaluation.** See Evaluation KEQ (KEQs 93-100) for full details. | To provide ongoing evidence to shape and develop the delivery model, and to capture outputs and outcomes of the project. | An extensive evaluation allowed deep insight to be gathered on project implementation and outcomes of LINE.

The framework ensured all elements were thoroughly examined and reported. |

Table 1 above outlines the evidence that the brokerage provided by hub leaders was essential to the delivery of the project, and shows how the web service and volunteering elements were not critical to stimulating LINE and supporting LINE activity in schools. The brokerage element increasingly became the focus for all project delivery as it became apparent that the four elements were not equally important to schools in enabling LINE.

35.2 Was project delivery in line with planned milestones?
Project delivery was mapped against the project timeline and key milestones identified. The project was a demonstration project, informed by insight research, to test new ways of working with schools, volunteers and LINE providers. The original planned milestones therefore shifted as the project progressed in the light of our learning. Original milestones and our achievement of targets were:
- recruitment of five hub leaders (achieved five)
- recruitment of 25 beacon schools (achieved 33)
- recruitment of 175 cluster schools (achieved 92)
- 200-500 volunteers supporting LINE in schools (325 recorded in schools)
- delivery of a one-stop shop, participatory web service (achieved through Countryside Classroom and range of social media)
- delivery of a robust evaluation of the scale, scope, impact and project processes (achieved as evidenced by the completion of the final report).

- **Recruitment of five hub leaders**

The project successfully recruited five hub leaders from different organisation types in the five project areas. This allowed an understanding of the strengths of different types of

organisation in the hub leader role that included a conservation charity, education specialists, a local authority and a social enterprise (see KEQ 20).

- **Recruitment of 25 beacon schools**

Interest in the role of beacon school was high across four of the five hubs and the quality of applications was high across all. A total of 33 beacon schools were recruited across the project, exceeding the target of 25.

- **Recruitment of 175 cluster schools**

This milestone was not met. A total of 92 cluster schools were recruited (as measured by completion of at least one project survey). However staff from a further 65 schools engaged in project activities or worked with project schools on LINE activities.

- **200-500 volunteers supporting LINE in schools**

The highest number of volunteers recorded as involved with LINE was 325 in the school baseline surveys. The total number of volunteers supporting LINE in schools during the project is likely to have been higher than this as the majority of case study schools demonstrated active volunteer involvement that was not reflected in their survey returns. However the development of volunteering in support of LINE did not develop in a uniform way across the project or over time; the milestone does not reflect the nature or scale of voluntary activity in support of LINE. Insight from the case-study visits suggests that the factors behind volunteer engagement in schools are complex and vary from school to school (see volunteering KEQs for full details).

- **Delivery of a one-stop shop, participatory web service**

The web service was not successful in offering a 'one-stop shop' for schools, nor did it foster a participatory community of users for the following reasons:

  - the Growing Schools website failed to generate sufficient dynamism to encourage large-scale participation of teachers and/or LINE providers
  - the lack of a coherent and funded marketing strategy
  - the mismatch between a national website and local delivery. Hub leaders wanted local control over resources they would be recommending and over on-line communication channels; national website users were not particularly interested in the Natural Connections project
  - the project's relatively short-time frame, which did not allow for the creation of a critical mass of teacher participants.

The project use of social media was successful in engaging people in the project and LINE at local, national and international levels (see web service KEQs for full details).

- **Delivery of a robust evaluation of the scale, scope, impact and project processes**

The collection of a large amount of data from a wide range of project participants has enabled a robust understanding of the project processes, scale, scope and impact. The evaluation instruments have been refined in response to all levels of project feedback, and now provide a toolkit for future project monitoring and evaluation. Schools valued the

qualitative elements of the evaluation to validate and promote their LINE work within the school and more widely. Slow school recruitment affected the length of time over which data was collected for all schools, with the majority of project schools providing data over 18 months.

35.3 Brokerage: Successes, challenges and risks

- **Hub leaders**

The first year of this four-year project was needed to establish the central team, hub teams and beacon schools before widening school recruitment. **The length of time needed to recruit and establish groups of 20-30 schools in hubs was around 12 months. The optimum time to recruit schools was the summer term, allowing integration of LINE into plans for the new academic year. The majority of schools recruited into the project were actively engaged for about 18 months.**

The most successful approach for recruiting and managing school participation was for hub leaders to enable groups of schools to operate flexibly, in ways that best met local needs without necessarily categorising schools as either beacon or cluster.

Hub leaders were successful in stimulating LINE activity both within in their hub's geographic area and beyond as project successes were publicised and shared between schools. The project worked across ten local authority areas. Strong interest from outside the original five hub areas attracted funds to establish additional project hubs in East and North Devon, with direct responsibility for management by the Natural Connections team. In addition another outdoor learning collaboration was established by the Wildfowl and Wetlands Trust (WWT) in Slimbridge, with support from the Bristol hub team. These new initiatives used the Natural Connections model while taking into account the lessons learned from the project.

Hub leaders created strong, collaborative networks for LINE in schools which school LINE leads reported they appreciated and valued. The networks helped LINE leads to stimulate and sustain LINE activity in schools.

There was a challenge in managing hub leaders' activity to provide the freedom for them to explore the hub leader role and test possibilities but at the same time to ensure that they met contractual targets. It should be noted, however, that recruitment targets were focused on areas of high multiple deprivation and took no account of the differences in hub areas in the number of schools, geography or existing educational networks.

There was also a challenge in engaging hub leaders in areas of project delivery that were not always seen as priorities for schools and around which there was no clear remit for hub leaders; hub leaders had finite capacity and tended to focus on their project priorities of school recruitment and support. Specific areas in which hub leaders did not always engage

fully were the importance of the evaluation, the functionality and usefulness of the Growing Schools web service, and the volunteering element of the project. The challenge posed when one of the original hub leaders left the project was met through the recruitment of a former headteacher in a beacon school who was able to pick up the project work quickly through strong, trusted contacts with local schools.

The one major risk in this area of project delivery is the sustainability of the networks that hub leaders have created. All hub leaders have plans or systems in place for networking and support for project schools but these have not been fully tested yet.

- **School recruitment**

Interest in the role of beacon school was high and 33 schools were recruited to this role (target 25). Recruitment of cluster schools was time-intensive. The project assumption that there was a latent demand for LINE in schools was correct, but it took longer and required greater resources to cultivate than anticipated. Teachers engaged with LINE when they had seen the benefits for themselves, but this took time to facilitate and enable as competing external priorities for project schools meant they could be unwilling to implement a new initiative.

The main challenge with respect to school recruitment was that insufficient schools were recruited or not recruited early enough in the project to enable full demonstration or evaluation of all core elements. The delay to school recruitment impacted on all other elements, as fewer schools meant that potentially fewer volunteers were involved, fewer schools would be able to contribute to the web service, and that the evaluation would yield insufficient returns to provide robust evidence. Non the less the evaluation returned sufficient data for statistically significant results.

- **LINE implementation in schools**

An extensive evaluation allowed deep insight to be gathered on project implementation and outcomes of LINE.

School survey respondents reported increases that were statistically significant in the time spent on LINE activity across all school terms.

Schools adopted many different models of LINE implementation, with anything from a few staff to many or all of the staff involved with LINE. In all cases, implementation was dynamic and changed regularly as staff developed and broadened their LINE practice. A pattern emerged in school survey comments in which schools: first, understood the benefits to pupils and teachers; second, increased levels of LINE activity; and third, increased the regularity of LINE activity and embedded LINE practice across the school.

Schools invested time, goodwill, energy and funding in LINE. **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.**

Over 90 per cent of schools surveyed agreed that LINE was useful for curriculum delivery.

LINE was used across all curriculum areas, most regularly and consistently in the core subjects of science, English, maths and PE. The percentage of maths lessons taken outside showed a noticeable increase over the life of the project. No statistically significant increase in non-curricular LINE activities was reported, although case-studies demonstrated that schools valued these LINE activities for their contribution to the foundational aspects of learning.

The most frequently reported challenges to LINE development in schools at recruitment 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, as a challenge, increased over the project as teachers developed understanding of the time needed to plan and deliver increasingly complex LINE practice.

Reflecting the project assumptions, 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 developed, 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.

Project schools chose to focus on building in-house responsibility and capability for LINE, generally within school grounds rather than in local green spaces within walking distance. Engagement with LINE provider services did not change significantly over the project, although some schools reported an increase in demand for services, including those to support CPD and school grounds development.

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

- o developing knowledge, understanding and practice of LINE
- o 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
- o addressing practical challenges such as funding, grounds development and health and safety requirements.

- **Impact of LINE in schools**

Reflecting the insight research[27] and project assumptions, the results confirmed increases in all the positive outcome areas assessed, for both teachers and pupils.

Positive impacts for teachers. The following proportions of schools agreed that LINE had a positive impact on:

- o teaching practice (79 per cent)
- o health and wellbeing (72 per cent)
- o professional development (69 per cent)
- o job satisfaction (69 per cent)
- o teaching performance (51 per cent).

Positive impacts for pupils. The following proportions of schools agreed that LINE had positive impacts for pupils:

- o enjoyment of lessons (95 per cent)
- o connection to nature (94 per cent)
- o social skills (93 per cent)
- o engagement with learning (92 per cent)
- o health and wellbeing (92 per cent)
- o behaviour (85 per cent)
- o attainment (57 per cent).

Pupil feedback reflected teacher feedback, with 92 per cent of pupils surveyed agreeing that they enjoyed lessons outside and 89 per cent agreeing they felt happy and healthy in lessons outdoors.

In the surveys, a majority of schools (57 per cent) attributed a direct positive impact of LINE on pupil attainment, substantially more than those who thought it had no effect. Teachers in case-study interviews reported having more confidence that LINE contributed to attainment than was indicated by quantitative surveys.

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[27] Rickinson, M., Hunt, A., Rogers, J. & Dillon, J. (2012). *School Leader and Teacher Insights into Learning Outside the Classroom in Natural Environments*. Natural England Commissioned Reports, Number 097.

Many case-study schools reported that they engaged with LINE for reasons that were related to supporting attainment and character development, including improving behaviour, social skills, health and wellbeing and engagement with learning. All of these were cited as foundational to successful learning. Interviewees from case-study schools emphasised that they also valued LINE for enabling wonder, creativity, support for particular concepts and bringing subjects to life.

In case-study interviews, teachers attributed a positive impact on pupil health and wellbeing to LINE, reporting that it offered a chance to escape the pressures of the classroom, the space to reflect, and the space and time to be physically active.

- **LINE providers**

The project was successful in stimulating interest from providers. The challenge with LINE providers related to managing and meeting their needs and/or expectations about what the project could offer their businesses, but without project capacity to support direct links between LINE providers and project schools. Hub leaders and the central team created a number of opportunities to help providers make these links (for example through network meetings, joint CPD events and market-place events); these were deemed successful for those providers who attended and were responsive to the school needs. Once the project team understood the general sequence of establishing suitable grounds and then developing school staff capacity for LINE activities, this could have been communicated more clearly to LINE providers. It is possible that a number of providers may have been disappointed that they were offered fewer benefits than they expected. It is also possible that progression in LINE development, if charted over a longer time frame, might reveal later demand for specific services from LINE providers and for volunteer inputs to meet increasingly sophisticated LINE planning.

- **Added value**

A large amount of financial added value was created by the project. This included
- Income of £50,000 from a variety of partners, including the Campaign for the Protection of Rural England Devon, Natural England, Devon County Council and the Devon Local Nature Partnership, for the Naturally Healthy Devon Schools Project.
- Cash for LINE development including a £5,000 grant from the Ernest Cook Trust for LINE development in Cornwall.

A large amount of in-kind support was attracted by the project, which included
- A year-long full time student placement contributed by Plymouth University.
- Resources for LINE in schools including a contribution from Vango of 10 tents for project schools.
- Bristol hub leader partnership with Project Wild Thing and development of the Wild Time for Schools web platform.

- o The development of two MA (Level 7) modules: 'The Experience of Outdoor Learning' and a leadership module 'Outdoor Champions'. Both were delivered by the Plymouth University Institute of Education.

- **Publicity and promotion and dissemination**

Project staff and their representatives have engaged with face-to-face project promotion through presentations to 3,943 people at 116 events. These included local, national and international meetings and conferences. The project also developed two short promotional videos; the launch film had been seen by 1,400 people online and by over 2,000 at different promotional events by the end of the project.

In addition to the conferences attended and presented, the project organised:
- o the 2014 'Walk the Talk' conference in partnership with the Plymouth Outdoor and Experiential Learning Research Network (https://www.plymouth.ac.uk/research/oelres-net);
- o the 2015 'Near and Far International Conference' with Natural England and a range of partners;
- o the 'Initial Findings' Economic and Social Research Council Social Sciences Festival conference in 2015.

Publications include: 18 editions of the project newsletter to a final distribution list of 1,589; two chapters in books; and one academic journal paper.

- **Budget and income generation**

The project had a total contract value of £700,000 with a target to raise c. £100,000 through income generation. The project was delivered within the budget and timescale. Over £29,000 was generated in income. The Income generation targets for the budget were challenging and were not achieved during the project. The activities that generated the most income were CPD events and additional research and consultancy work This shortfall was a major challenge for the project and was managed primarily through reconfiguring roles and responsibilities of central team staff and saving money through stopping work on aspects of the web service that were not contributing to project success.

There was an additional challenge related to income generation that whilst it was possible, although time consuming, to generate income at a local delivery level (hub or school), funding the central administration of a project that already had government funding was often not possible. The criteria for many grant applications precluded this. Income generation would be best focused on project activities aligned to supporting longer term sustainability such as teacher CPD

35.4 Volunteering: Successes, challenges and risks

There was a small but statistically significant increase in the proportion of volunteers involved in LINE across project schools. Project findings show that the resource to support volunteer development needs to be flexible because schools tended to build their confidence in LINE before considering the additional requirement of supporting volunteers.

The highest number of volunteers recorded as involved with LINE was 325 in the school baseline surveys. The total number of volunteers supporting LINE in schools during the project is likely to have been higher than this as the majority of case study schools demonstrated active volunteer involvement that was not reflected in their survey returns.

There were examples from case studies of volunteers enabling LINE activity and driving it in their school. Case-study evidence suggests this was more to do with the school ethos as a whole than the enabling effect of LINE on volunteer development. For example a volunteer in one school who was instrumental in cross curricular work felt that the '*school communicates well with parents and* [staff] *are welcoming to any help'.*

Volunteering did not develop as anticipated in project schools as a whole with the result that the volunteer element could not be tested in the scale and scope intended. Schools reported that they valued volunteers and their contribution to LINE, however, and the lessons learned from this project element will be valuable in informing any future activity. **In particular**

- **that schools appeared to need to understand and develop their own LINE practice before they were ready to engage volunteers in their LINE work. Central team volunteer support would have been more effective if it had been phased into the project once schools were confident with their own LINE practice**
- **support for schools in the volunteering element of the project was most effective when delivered locally alongside other brokerage services**
- **there was a challenge involved in encouraging schools to commit the time necessary to recruit and work effectively with volunteers; a staff member with a dedicated volunteer support role was needed for the school to engage successfully with volunteer support.**

The effect of this was insufficient time to test the volunteering element of the project in depth and detail (see volunteering KEQs for full details). However volunteers do not appear to be an essential pre-requisite for schools to engage with LINE and increase LINE activity.

35.5 Web service: Successes, challenges and risks

The project confirmed the need for a broad web service strategy that was responsive to support school needs. **Collaborative development of online resources, designed *by* local LINE practitioners *for* local LINE practitioners emerged as the most likely ways to support delivery. In addition low-cost, responsive social media such as Twitter and blogs were useful for disseminating information.**

The web service comprising the Growing Schools website and use of various social media including Twitter was successful in promoting and publicising the project. The project made a valuable contribution to the development of the Countryside Classroom website through the learning experienced with Growing Schools.

As was the case with volunteering, the presence of a participative, 'one-stop shop' web service did not appear to be an essential pre-requisite for schools to engage with LINE and increase LINE activity.

35.6 Evaluation: Successes, challenges and risks

The evaluation data returns were sufficient for a robust evaluation of the project. Gathering evaluation and reporting data from schools required considerable effort and the central evaluation challenge was to ensure sufficient data returns from schools to enable a robust evaluation. Much of this focussed on developing relationships with schools and encouraging schools to participate in case-study visits. This involved communicating the importance and relevance of the evaluation and sharing findings in a timely way. However the initial slow school recruitment meant the evaluation team had limited information for analysis and information production at the start of the project. Requests for survey data had variable results from schools, but 24 willingly hosted case-study visits, and these were seen as valuable illustrations of LINE activity by schools, provided deep insight into LINE activity in schools, and were often reported by hub leaders as a validation of their work.

The project was able to capture deep insight and quantitative data on a range of positive outcomes for schools, which provide motivational and inspirational evidence for schools, policy bodies and possible funders. In addition, detailed analysis of the effectiveness of the delivery model tested has helped to clarify essential elements of outdoor learning development, including school autonomy in choosing where they started their LINE practice, whole school action planning with brokerage to access training and guidance, and embedding LINE within curriculum subjects and other school priorities for its long term sustainability. These insights in turn will be used to inform strategies and plans to amplify support for LINE delivery in schools at both a strategic and a local level.

KEQs 44-64. Volunteering

Project element and objective	Assumptions
Volunteering: • Stimulate demand for LINE activities in schools • Support schools in building LINE into their planning and practices • Stimulate supply of LINE for schools	• Motivated and skilled volunteers will demonstrate that volunteers can support LINE • Volunteers are an untapped resource that can support LINE in schools • Volunteers increase schools' capacity to deliver the curriculum through LINE • There is a full range of volunteering opportunities available • The cascade model can deliver a sound reflective volunteering programme that meets schools' needs • The cascade model can deliver a sound reflective volunteering programme that meets volunteers' needs

KEQs 44 – 64 are covered in the following headings

44.1 The project volunteer model

44.2 Developing volunteering in hubs

44.3 Did schools engage volunteers?

44.4 Schools' experiences of working with volunteers

44.5 The impact of volunteers

44.6 Volunteer views

Data sources

Hub leader interviews, volunteering reports from Plymouth and Bristol hub leaders, baseline school survey, July 2015 school surveys, June 2013, November 2013, June 2014, November 2014 activity logs, school case studies, volunteer surveys and Principal Motivations of Natural Connections Project Volunteers: A Pilot Investigation by David Buckland (PU student).

Key points

Communication and clarity of role around the volunteering element

• The findings of the project suggest that schools were not fully aware of the commitment required to have met volunteers' needs as well as their own; this may have accounted for unsuccessful attempts to increase volunteering overall.

• Some schools seemed enthusiastic about the idea of volunteers but were unclear about the role and how to support and deploy them. Schools wanted to be confident in their own LINE practice and in what they were asking volunteers to do around LINE, and so developed their own practice before engaging volunteers.

• Hub leaders and individual schools attached different levels of priority to volunteering.

Impact on project findings and recommendations

- The volunteering element of the project could not be tested fully as it did not progress as anticipated, and this element of the project generated insufficient data to allow robust conclusions to be drawn.
- LINE was viewed by a few schools as effective in engaging parents in children's education.

Management and deployment of volunteers in schools

- Some schools already had enough capacity with their parent volunteers to deliver LINE.
- Schools found it difficult to work with volunteers from external organisations. This was due to differing organisational motivations and problems with communication.
- Case-study schools, including those that saw themselves as successful in working with volunteers, reported that recruiting volunteers and engaging parents was *'hard work'*.

NOTES

Schools did not engage with the volunteering element of the project as anticipated. This meant that there were a number of issues related to the evidence on volunteering:

- A small number of volunteer interviews during case-study visits, due to the lack of volunteer availability.
- A very small number of respondents to the volunteer survey.
- Inconsistent reporting of volunteer activity by schools; several case-study schools reported that they had no volunteers in their survey returns, although volunteering activity was reported during case-study visits.

As a result some of the specific KEQs have insufficient data to provide robust answers (e.g. KEQ 56 Are there key outcomes and outputs that can be directly attributed to the volunteer programme for volunteers?). We have therefore reported on the volunteering element as a whole.

While the project was not able to test the volunteering element fully, useful insights have nevertheless been obtained for future delivery.

44.1 The project volunteer model

A full-time Volunteer Development Officer (VDO) was recruited by the central team at the start of the project in November 2012. Her role was to

- Develop a robust framework for LINE volunteering in schools that addressed school priorities, including a 'Volunteer Handbook'.
- Identify challenges to LINE volunteering and develop creative solutions, including skills development opportunities.
- Support schools in recruiting, training and managing volunteers to support sustainable LINE activity.
- Create relationships and partnerships with stakeholders, broker volunteer opportunities and provide information, advice and guidance.

At the end of June 2013 the VDO left for a new job and a replacement was appointed in August 2013. At this point the project undertook a review of the volunteering element of the project. Points to note included that:

- Hub leaders and individual schools attached different levels of priority to volunteering. It was decided that the VDO needed to work in those hubs that were demonstrating enthusiasm and interest, i.e. Bristol, Plymouth and Cornwall, with a view to cascading good practice from these throughout the project.
- The case needed to be made to schools of the benefits that volunteering could have for LINE delivery and of the issues involved in recruiting and managing volunteers.
- Schools needed considerable time to embed LINE into their practices. During this time, volunteering tended to be of secondary importance and schools were more receptive to developing the volunteering side of their LINE activities once they were confident that they had consolidated their LINE practice and established it into their curriculum.
- Relationships were developed with Volunteer Plymouth, Volunteer Bristol and Volunteer Cornwall as brokers for volunteer recruitment in these hub areas.
- A partnership was developed with The Conservation Volunteers to provide CPD opportunities for teachers / school staff in Devon and Cornwall
- A partnership with Plymouth University Student Union Volunteer Office was agreed and students were targeted as potential volunteers in the Plymouth, East Cornwall and Torbay hubs.
- The project needed to develop a clear offer / resources for partners, schools and volunteers (e.g. LINE volunteering handbook)
- It became clear that that volunteering in a school required a certain set of core skills and values, and that volunteers may not recognise the need to develop these.
- Training needed to be tailored to individual and host school needs, but the central team and hub leaders did not have sufficient resources to work with each school individually.

As a result of this review the VDO role was modified to:

- Promote LINE volunteering to all schools.
- Continue to offer on-going face-to-face support to schools, but only to those who actively sought support with LINE volunteering.
- Develop strategic partnerships (with, for example Volunteer Bureaux) to encourage schools to work independently with volunteer organisations and volunteers.
- Develop a more user-friendly 'Volunteer Handbook', this was produced in the form of a simple leaflet for schools.
- Work with the Cornwall hub leader to develop a 'train the trainer' event to support beacon schools with volunteering.
- Work with the Bristol and Plymouth hub leaders to test some of the issues that had been identified around volunteering in schools through two local projects
    - The brief for the project in Plymouth was to:

- Support existing volunteers to form a Plymouth LINE volunteer hub group (including training support).
- Continue to link schools with local 'friends of' groups where relevant.
- Engage with volunteers from environmental groups to establish skill sharing and support for LINE events across the city.
  - The brief for the project in Bristol was to:
    - Explore a sustainable volunteering model with schools and partners in the Bristol and Somerset Natural Connections hub areas.
    - Develop LINE volunteer projects in schools.
    - Test the success (or otherwise) of a variety of approaches and situations.

The second VDO left the project in March 2014. The Project Manager (Delivery) and a Natural England staff member took on the volunteering remit across the project at this point and managed the Plymouth and Bristol projects respectively.

44.2 Developing volunteering in hubs

Bristol

The hub leaders initially reported that Bristol schools were '*desperate'* for volunteers to fulfil the appropriate adult / pupil ratios for off site visits. This was reported as particularly important for schools in built up areas with limited school grounds, and that this type of support required significant forward planning. The reliance on volunteers for this supervisory role meant that some schools had a culture of only using volunteers in this capacity. Nonetheless some schools did engage with volunteers and one beacon school reported an increase in volunteering across the school (not just LINE), having seen the value that volunteers could bring.

The hub leaders felt that they were '*slightly naïve'* in originally thinking engaging volunteers with schools would be '*fairly straightforward'*. The hub leader said they would have benefitted from more clarity about what the central team was, and was not, able to offer to support volunteering.

The Bristol hub leaders approach concentrated on:
- Engaging organisations with an existing active voluntary membership that could be available to support LINE in school, for instance RSPB or local community groups. The aim was for the hub leaders to broker relationships so that schools could recruit individual volunteers through these organisations. The hub leaders initially found working with such volunteer groups difficult; they felt such groups could be difficult to access, and they found explaining what LINE was and how groups could work with the project was challenging. The long-term intention of this work was to create a

regular pool of volunteers who worked with one school and could offer regular availability, so schools could map activities around them.

- Paying for all beacon schools to access Volunteer Bristol (VB) services. Although take-up of this service was used variably, some schools valued the access to volunteering expertise and VB were reported as working hard to understand school needs. Some schools did not access this service because they were not able to provide the role descriptions required by VB. VB was seen as part of the sustainability of the project as they could provide a service to schools beyond the life of the Natural Connections project.

The hub leaders reported that, although schools said that they wanted volunteers with a variety of skills, experience and availability, the issue remained that most schools did not have staff capacity to undertake the volunteer co-ordination role needed to enable quality work with volunteers.

The Bristol hub leaders explored the issues facing schools and volunteers through a short volunteering project commissioned by Natural Connections. The hub leaders worked with schools and voluntary organisations and, although only a small number of volunteers were engaged directly, their report highlighted some important points. Particularly:

- Schools were not used to thinking *'volunteer'* but commonly worked with parents or grandparents to help with outdoor activities on an *'ad hoc'* rolling basis. While many schools had a volunteer audience, schools needed to be more strategic in how they recruited and employed volunteers in terms of skills, sustained involvement, time and experience.
- Some schools already had enough capacity with their parent volunteers to deliver outdoor learning.
- Communication difficulties caused long delays between schools, agencies and potential volunteers which prolonged and damaged the recruitment process; time scales for planning volunteers' input needed to reflect this.
- Schools found it difficult to motivate and work with volunteers from external organisations. This was due to differing motivations and communication channels.
- Training teachers and providing a greater awareness of what motivates volunteers, and how to best engage and care for them in schools, could be important for further recruitment.

Cornwall

The Cornwall hub leaders were keen to promote volunteering from the start of the project as an accredited and structured programme for volunteers. They considered that a structured programme would play a part in engaging volunteers through helping to quality assure volunteers' work, providing support to schools new to volunteering and promoting sustainability of LINE volunteering.

However the hub leader reported that many schools had difficulties finding volunteers other than parent volunteers, and would need a lot of training to engage new groups. This potential extra training was reported as likely to be a *'burden to fit in'* alongside the introduction of LINE to many schools. In Cornwall project schools the hub leader had *'a strong sense that volunteering isn't a big feature'*. They reported that some schools did engage with volunteers effectively but others were struggling.

The hub leader felt engaging LINE volunteers with schools would always encounter issues because of the extra management demands; they made the comment that schools were more familiar with volunteers for activities such as sports coaching because it was a clearly defined task. The hub leader also raised the issue of the resource required to work with volunteers and the cost / benefit of time spent recruiting against a relatively small volunteer contribution. They made the comment that '*schools find managing volunteers very difficult for the same reasons we find managing LINE providers* [difficult]*; it's an additional management chore for … already busy people and that's what's articulated to me wherever I go … It's a big issue getting people in sorting it, being with them, making sure everything is going tickety-boo and going to plan. And they* [schools] *don't have the resources for that'*.

However the hub leader developed contacts at Volunteer Cornwall (VC) with the aim that VC, as a recognised volunteer organisation, would take a lot of the bureaucracy around volunteering away from schools. The hub leader reported that schools needed an organisation that specialises in educational volunteering and who understands schools and is able to communicate effectively with them.

The hub leader reported that successful volunteering in schools in Cornwall involved parents: '*where it* [volunteering] *has been successful is by bringing parents on board … and parents have given a lot …They are really on board and they are asking questions about it and they are offering positive practical help for it, so in terms of a particular groups of volunteers it's all about parents. Beyond that* [it's] *very, very patchy, very patchy'*.

North Somerset
The hub leaders' initial view was that schools were keen on volunteers but that *'a lot of them don't really know how to start, how to recruit. I think they know how to recruit parent volunteers. What they don't know how to recruit is specialist volunteers or volunteers that could support in developing areas of work'.* The hub leader believed that when schools were interested in volunteers, they wanted both specific expertise and flexible availability. In addition schools were reported as developing new initiatives as part of engaging with the Natural Connections project; they wanted volunteers who could help them set up a new project, which parents could not always do.

The hub leader had initial discussions with volunteering support organisations, including the Salvation Army. By the end of the academic year in 2014 the hub leader reported that schools had engaged with volunteering to different degrees and that it had been hard to

encourage them to work with volunteers if they were not already interested in doing so. They reported that those schools who had engaged with volunteers did so when driven by a need within a school (for instance for extra adults for trips or school grounds development), and so offering generic volunteer support was not seen as productive. Successful work with volunteers in this hub included supporting LINE in schools and maintenance work on a woodland area.

One notable approach reported by the North Somerset hub leader was the use of skills questionnaires for parents at the beginning of the school year to enable schools to understand what expertise was available. The hub leader reported that at least two schools used the questionnaire to find help for tree management and sourcing free timber.

Plymouth

The hub leader reported engaging volunteers was not seen as a priority by beacon schools although they were '*amenable'* to the concept. They also felt that by April 2014 the project schools were not yet ready to engage volunteers: 'W*e are not really at that stage with the schools yet, so that's I think frustrating for* [central team VDO] *and a bit frustrating for us, because we are aware that she has got a limited amount of time and hours will be reducing and it could have been the other way round really, where the volunteer co-ordinator came into the project at a later date. So once we had established the schools then the volunteer co-ordinator comes on board'.* The hub leader felt that a more effective approach to volunteering would have been to find out which schools were *'doing volunteering really well'* and to build on this work, although they supported the '*low-key, pragmatic'* approach taken by the project after the volunteer review in June 2013.

The Plymouth hub leaders reported that was was hard to achieve progress with volunteering in schools. They felt the Natural Connections project did not have the resources needed to build volunteering and spread practice, and equally that schools had limited capacity to develop this area of work themselves.

The Plymouth hub prepared a short report for the volunteering work commissioned by Natural Connections.

- The hub leader worked with the Plymouth Guild of Volunteers who *'ran a discussion group with schools and providers to understand the barriers that schools face with* [engaging] *volunteers so that they can help to overcome this using LINE volunteering as the case study'.*
- The hub leader worked with a group of volunteers through LINE events run in local greenspace in Plymouth. Volunteers were trained to lead LINE sessions and, through this, a small team of volunteers was established; the plan was for the group to be self-sustaining over the long-term, perhaps re-constituted through a 'Friends of LINE / greenspaces' group. However hub leaders commented that *'with all these things, they never really become self-sustaining … They are always needing that support and development and encouragement'.*

Torbay

At the start of the project the first hub leader reported that some schools had had bad experiences with volunteers in the past and were not keen to try and engage them. As a result the hub leader wanted to change the way that volunteers were seen and worked with in schools: *'I don't think it's about just trying to get schools to do a bit more volunteering; I think it's about really trying to fundamentally change or transform for a set number of schools how they see volunteering, how they see what's possible around volunteering and create some really exciting examples'*

The hub leaders had some success creating these examples and one school worked successfully with volunteers for their summer 'country show' in 2013. The hub leader reported that the school did not see volunteering as a separate activity from the event, or from wider community engagement.

However by early 2014 the hub leader felt that volunteering had not been on most Torbay schools' agenda. Schools' interest in involving volunteers was variable, and the hub leader reported that most were not interested, although one or two had already embedded working with volunteers across the school (not just in LINE) into their school ethos before the project started.

In their exit interview the first hub leader felt that volunteers needed to be thought of in a creative way, rather than *'let's do volunteering'*. They felt schools needed to identify their needs and work out if volunteers could help them do that better. They argued that there could be an issue for the project if engaging volunteers became the end point, rather than looking at working with volunteers as a solution to a problem. They felt the volunteering support role should have been flexible and accessed when needed during the course of the project, rather than a fixed resource from the start of the project when it was not needed by schools just starting to engage with LINE more deeply.

The second hub leader reported promoting volunteering and some school volunteering activity in Torbay, but commented on a general lack of understanding around what a volunteer was: *'I think people didn't really understand what volunteering meant because there are lots of volunteers … schools have working parties with parents coming in. I tried to promote the STEM ambassadors and actually quite a few schools were actually already using them. So many parents are parent volunteers'*.

44.3 Did schools engage LINE volunteers?

- **Numbers and proportion of volunteers in schools engaging with LINE**

The scale and nature of volunteering activity varied between schools, but the overall proportion of volunteers who engaged with LINE increased. This reflects the increase in engagement with LINE and LINE activity by project schools.

Figure 44.1 below shows the proportion of school volunteers involved in LINE at a project and hub level. The figures were calculated by dividing the number of volunteers reported by schools as involved in LINE delivery by the total number of volunteers working in schools to produce the percentage of volunteers involved in LINE delivery.

Across the project, the proportion of school volunteers engaged with LINE rose from 22 to 28 per cent, a statistically significant increase (p-value <0.001). At the hub level, the proportion of volunteers involved with LINE rose in Bristol (from 29 to 46 per cent), North Somerset (from 14 to 28 per cent) and Plymouth (from 22 to 36 per cent), but fell in Cornwall (from 37 to 23 per cent) and Torbay (from 14 to 12 per cent).
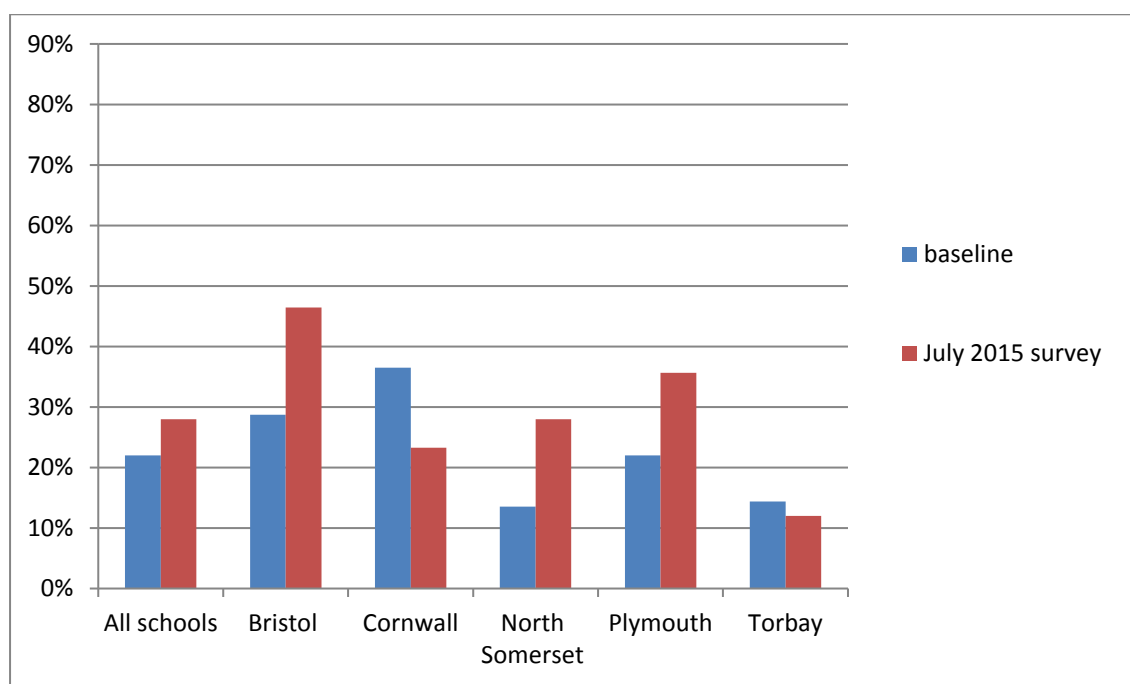
Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 school survey n= 84: Bristol n=16, Cornwall n=12, North Somerset n=14, Plymouth n=25, Torbay n=17
Figure 44.1: Project and hub level: proportion of school volunteers involved with LINE

Figure 44.2 adds to the picture as, despite the statistically significant increase in the proportion of school volunteers involved in LINE, the actual numbers of volunteers and LINE volunteers reported by schools fell. Across the project 325 LINE volunteers were reported in the baseline and 138 in the July 2015 school survey. This decrease in numbers was reported in all hubs, although we do not have a clear picture of all volunteering activity in schools across the project. Case study visits, however, have provided some insight into school views of what a 'volunteer' might be. Schools have relationships with parents, LINE providers and other organisations that have voluntary elements, but these are not always explicitly recognised by the school. As a result there may be an element of inconsistency in how schools reported volunteers between schools, within schools and over time. Further evidence for inconsistency in reporting volunteers is also provided by some case study

interviews in which schools that reported no volunteers in the surveys demonstrated considerable voluntary activity during the visits.

Another contributing factor to this decrease in volunteer numbers may have been a reduction in the schools' reliance on volunteers as teachers developed their own skills in LINE. Most LINE activity took place in the school grounds (see KEQ 1 and 2) and this may have reduced the number of volunteers required for LINE sessions.
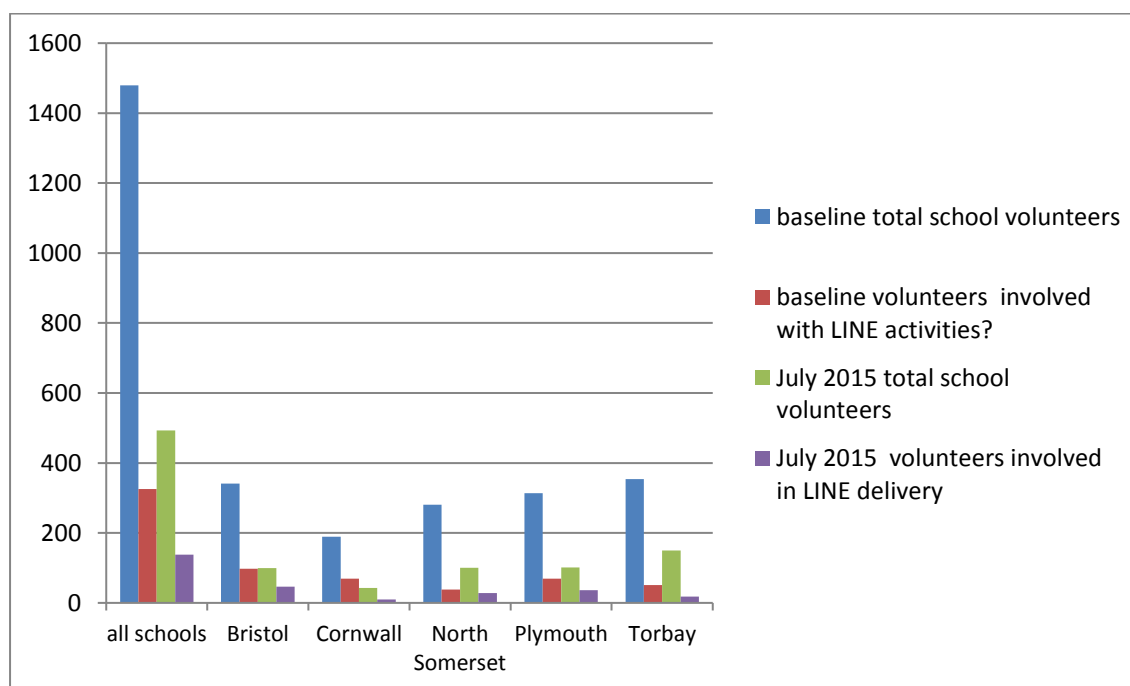

Baseline n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
July 2015 school survey n= 84: Bristol n=16, Cornwall n=12, North Somerset n=14, Plymouth n=25, Torbay n=17
Figure 44.2: Number of volunteers in schools: total and those involved in LINE delivery

44.4 Schools' experiences of working with volunteers

- **School volunteer recruitment**

There was no project-wide data that illustrated the proportions or numbers of schools that accessed volunteers from different sources. Schools recruited volunteers through the central team, hub leaders and their own relationships. Interviews from 24 case-study schools provided insight into this process of recruitment.

Early in the project some schools worked with volunteers through relationships brokered by the central team. Examples of effective brokerage included:
- o Volunteer recruitment and training by the central team and subsequent placement of volunteers with a number of beacon schools for Empty Classroom Day in 2013.
- o Pond training day at a Plymouth beacon school. This provided skills training for volunteers and pond management and maintenance for the school

This approach, however proved to be too time-intensive for the central team to manage across all five hubs and was reviewed when the first VDO left in June 2013. From then on, the central team and hub leaders worked with schools to help them develop relationships with volunteer support organisations, such as volunteer bureaux. The Bristol hub in particular adopted this approach with its beacon schools. These emergent relationships showed that volunteer bureaux did not have a sufficiently wide understanding of school-based volunteer issues to promote and support volunteering in schools effectively at that time. Nonetheless three hub leaders reported volunteer bureaux in their area were keen to improve their understanding of schools and to work more closely with them. They reported that this was likely to be a relatively slow, iterative process and that it may involve a cost to schools but, on the positive side, it also had the potential to provide a long-term source of quality-assured volunteers for schools.

The most successful relationships that developed between schools and volunteers arose as a solution to addressing school priorities and were therefore essential to the school. Some volunteers were, by the nature of the task, short-term but others were longer-term and could blur the distinction between LINE providers / communities and volunteers. Examples reported by schools and hub leaders included:

- o A school in Torbay where the gardening volunteers were directed by the catering manager. The school had an award winning kitchen and volunteers enabled the school to use the garden as a source of fresh produce for curricular work.
- o A school in Torbay linked up with its local RSPB volunteer, built a bird-hide and took part in a national bird watch scheme
- o A Bristol school had an informal arrangement with neighbouring allotment holders who helped out with watering and *'keeping an eye'*. This allowed the school to keep and work an allotment but without the day to day investment of staff time.
- o A Bristol school developed a relationship with a LINE provider (naturalist and educator) who sometimes charged, sometimes worked for free and always provided free advice. With the help of this LINE provider, this school expanded what they offered to pupils through curricular experiences and improved school grounds.

Case-study schools, including those who saw themselves as successful in working with volunteers, reported that recruiting volunteers and engaging parents was *'hard work'*, and that managing volunteers required ongoing energy and commitment if it were to be successful.

- **Who volunteered?**

  - **Parents**

Parents were the most frequency-cited source of voluntary help for schools, with 19 out of 24 case study schools reporting parent volunteers. Schools clearly had good access to parents but still needed to provide interesting, engaging opportunities for parents to participate in their children's education and to make a contribution to LINE. **Volunteering and parental engagement in children's learning were often interlinked and equally valued by schools**

Parental engagement was clearly not confined to LINE but many case-study schools saw LINE as an effective way to achieve this. Engaging parents in children's education has been identified as a key enabler in their education[28] and this was clearly a motivator for case study schools. Examples of activities used to engage parents included school-day activities such as den building, outdoor cooking and Forest School, and after-school activities that were both social events and a showcase for children's work. One headteacher reported that their school had worked hard to engage parents and that both the work they did and the environment in which they did it (outdoors) helped with this engagement. Staff reported in case-study interviews that LINE was effective in engaging parents for several reasons, including:

- Children went home '*buzzing'* when they worked outside and it was these experiences that children related to their parents. This helped to engage parents who did not connect with school on an academic level.
- LINE was seen as *'non-threatening'* to parents who had not had positive educational experiences in their own childhoods.
- Forest School activities were seen by a few schools as particularly effective in engaging fathers, because of its emphasis on an exploratory, hands-on approach.

One school in particular had found it difficult to engage parents and had given the process a lot of thought. They had also tried a variety of formal strategies over a number of years. They reported that their engagement of parents was now *'organic'* and without a formal structure; the school planned events at the beginning of year and signed in volunteers for each event. The head described LINE as the '*magical injection into getting things going'* and that it '*formalised the informal way'* to do things.

  - **Grandparents and wider community (including school neighbours)**

Grandparents and others were often seen as a source of skills and expertise that was not available from working age parents, and schools recognised their skills and appreciated their availability during the school day. Community relationships were sometimes reported as

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[28] HARRIS, A. AND J. GOODALL, 2007, Engaging Parents in Raising Achievement. Do Parents Know They Matter? Department for Children, Schools and Families

serendipitous; one school had an allotment and received spontaneous offers of help with watering and maintenance jobs when working alongside neighbouring allotment holders.

o **Teaching assistants and other existing school staff**

TAs and other school staff volunteered beyond the limits of their jobs on a number of occasions. This relationship was reported in one of two ways:

- Staff who were appointed to a paid role first, who later expanded their role on a voluntary basis. Examples included using gardening in the 'Thrive' approach with particular groups of children by TAs.
- Volunteers' contribution to the school's LINE work became recognised and consolidated through appointing them to do this role in a paid or part-paid / part-voluntary capacity. An example of this was provided by one school, where the risk of losing the volunteer who had developed and ran their gardening area prompted the school to employ them as a TA and LINE co-ordinator.

o **Other sources of volunteer support**

Schools also reported a wide range of other voluntary support for their LINE work including

- Corporate volunteers (facilitated both with and without parents)
- Special interest groups (for instance for Duke of Edinburgh and Ten Tors work)
- Charitable support (for instance Prince's Trust volunteers)
- Church volunteers (particularly for church schools)
- A military rehabilitation organisation (provided access to adults with outdoor / bush craft skills)
- Community groups (general community associations, allotment societies)
- Student placements (including but not limited to Initial Teacher Training placements)
- University student volunteering groups (not necessarily on a placement)

Support could be through individuals working with schools but more often it was in larger groups, with the result that they were able to tackle bigger developmental jobs such as the landscaping of school grounds, clearance and construction.

- **The role of volunteers**

Schools reported that they valued volunteers for their skills and expertise and the contribution they could make to children's education; as one teacher put it, *'Well structured, well organised volunteers with a purpose, you can't get better!'* All but one of the case-study schools reported that they worked with LINE volunteers in some capacity. Many case study schools valued volunteers in terms of:

- o Their ability to support and interact with children, providing *'soft skills at the point of use.'*
- o Their expertise, combined with their willingness to provide practical support for the school: '*I think once you know your parents and you know what skills and they know you, they will come in and offer to do it, you don't have to ask.'*

There is, then, a clear value for schools to work with volunteers on LINE. School motivations in working with volunteers varied according to their needs, but the roles that volunteers played in LINE activity can be grouped from case-study evidence into the categories of enablers, experts, assistants and ground workers. We discuss these below.

- o **Enablers**

Schools reported that some volunteers were able to initiate new LINE activity. These volunteers had desirable skills from a school point of view, but more than this they had either a position of influence within the school or a member of staff who worked with them to engage children with what they could offer. Examples included

- ▪ A speech and language TA in Torbay (part-time) volunteered as a parent for projects and school trips: *'I am an artist when I am at home…so I kind of go on trips with that head on'.* She reported that this was often used for inspiration back in the classroom for different projects. The school have won a number of 'Dart Harbour, Young Champions Awards' for their art projects.
- ▪ A parent in Torbay helped out with school trips, particularly to the beach and shore as he had lot of knowledge in this area. He also set up a rock pool tank in the school which was captured in You Tube video. The creation of the rock pool tank came about when he found out his daughter's class topic was the seashore. The class teacher was reported as enthusiastic about and supportive of the work.
- ▪ A TA in Bristol drove the development of the school garden and used it during her work as a TA with children on the Thrive programme.
- ▪ The LINE lead in a Plymouth school worked as a TA. She had been involved with outdoor learning at school for over seven years, first as a parent / volunteer and then as a volunteer. The school's gardening work was the start of her involvement and since them she has been central to most outdoor activity in the school. As a volunteer she organised the gardening club and then worked on developing areas in the school grounds. The LINE role was still voluntary as a lot of what she did was outside her working hours.
- ▪ The LINE lead at a different Plymouth school was a TA who originally started as a volunteer and provided the majority of the LINE element of the school's extensive enrichment programme during staff PPA time.

o **Experts**

As was the case with the enablers above, this group often had specific skills and may have had specific responsibilities such as for gardening / animal husbandry, but the LINE activity was led / instigated by teaching staff within the school. This group allowed the school to access and enhance children's learning experiences through expertise and local knowledge both within the curriculum and more widely. Examples of skills cited in case studies included:

- Gardening
- Animal husbandry
- Beekeeping
- Natural history / habitats
- Bushcraft skills
- Funding applications
- Building / construction skills.

o **Assistants**

Most schools reported involving volunteers to provide adults to allow suitable adult / pupil ratios on off-site trips and more hazardous activities in school grounds, as well as improving the experience by allowing children to work in smaller groups. Examples of roles included:

- Supervisory roles during off-site trips
- Forest School support to enable children to work in smaller groups
- Small group work for other curriculum work outside.

o **Grounds developers / maintainers**

This group included parents who were unable to support LINE activity during the school day but still contributed their professional skills to school grounds provision. These included tree surgeons, builders and landscape gardeners.

Most volunteering for school grounds work was related to development, because:

- It was easier for school staff to work with volunteers (particularly parents) on an ad hoc basis
- It was easier for staff to direct volunteers on one-off tasks than to supervise ongoing work.

- **What were the challenges to working with volunteers?**

Most volunteer activity in case-study schools was co-ordinated by individual class teachers. This was because the need for volunteers was usually identified at class level. Teachers then had to advertise for, recruit and manage the volunteers with limited support from the school office. A small number of case-study schools did provide some support for class teachers, with business managers and reception staff helping to manage the functional side of managing volunteers, such as organising DBS applications.

There was only one school where the recruitment and management of volunteers was part of a staff member role. This was a school in Bristol where a non-class-based deputy

head/LINE lead undertook the role. This was reported as a role worth formalising as the school had regular, high-quality enquiries from students at the University of the West of England who were keen to volunteer with a multi-cultural inner city school with a good academic reputation and a well-developed Forest School programme.

There was no project wide-evidence that can summarise the key factors in managing a school-based volunteer programme. The school case study visits, however, gave an insight into some of the challenges and solutions to working with volunteers. These are discussed below.

o **Teacher capacity**

School staff needed time to identify priorities and understand possibilities around volunteers. This included developing schools own LINE priorities, developing shared priorities and understanding how volunteers could contribute to and enhance planned work.

The role of recruiting and managing and maintaining good relationships with volunteers in school was reported as a challenge for teachers. These included but were not limited to administration of DBS certificates, the creation of role descriptions for volunteers and developing school volunteer polices. Teachers in some schools were able to delegate some responsibilities to school administration staff, but their time was also limited.

o **Teacher confidence and experiences**

A number of hub leader interviews and several case studies highlighted the issue of teacher confidence when working with adult volunteers. Interviewees reported that volunteers needed more frequent, detailed guidance to work independently, and teachers found difficulties with this type of supervision. In addition, interviewees reported that many teachers who were new to LINE wanted to be confident in their own LINE practice before undertaking another new role - working with volunteers.

Case study interviews highlighted that teachers' previous experience with volunteers could influence their willingness to work with volunteers. Examples reported included:

- Parental volunteers on trips *'baby-ing'* their children and reducing their learning opportunities.
- Perceptions that volunteers were unreliable
- The time and effort required to train volunteers to the point where they were seen as meaningfully involved was seen as prohibitive. One teacher in a secondary school reported that volunteers '*were more work than what their time was worth'.*
- A few interviewees advised caution about the messages that volunteers may try to impart to children (e.g. religious beliefs) over and above any skill they may be offering.

o **Volunteer expectations and motivations**

Reported difficulties in working with volunteers included:

- Unrealistic volunteer expectations. One secondary school reported that some volunteers did not understand the circumstance or demands of teaching and '*had an image of coming in and inspiring children through gardening ... and the children were busy wanting to stab stuff with a fork!'*

- Volunteers' own reservations about working with schools. One beacon school experienced this when they reported that a group of potential volunteers at a local allotment had reservations about getting involved with them as they had had previous *'bad'* experiences with another school.

- Mismatch of personal interests and school priorities. It was reported that parents volunteer for, and become involved in, what they are personally interested in rather than focusing on school priorities.

- In summary, schools that reported successfully engaging and working with volunteers had aligned their volunteering activities to the whole school ethos and articulated the importance of including parents and the community in school life. This meant that schools were visibly placing value on the contribution of volunteers. This was illustrated in the following examples:
  - o Staff interviewed at a beacon school in Cornwall believed that there were a number of factors that led to successful volunteer engagement: a persuasive head, a small close-knit community, and a willingness from children's parents, grandparents, neighbours and others to make an active contribution to the community (for instance through litter picks),. One interviewee commented that '*if we are quite passionate about doing it ourselves that perhaps spreads into the children, who then go and pester people to ... come and do some stuff'.*
  - o Another school pointed out the importance of open communication. Volunteers in a Torbay beacon school felt it was easy to get involved and that the school communicated well with parents well and were welcoming to anyone willing to help: *'They are always quite open about these things …* [they say] *we are having a trip, is there anyone who would like to help out, or interested in coming along?'.* Volunteers commented that '*it is very easy to come in and chat to the teachers'.*

44.5 The impact of volunteers

Figure 44.3 below shows that in the project baseline surveys 60 per cent of responding schools reported that volunteers were 'important' or 'very important' to the school's LINE delivery. 15 per cent of schools across the project reported that volunteers were either

'unimportant' or 'very 'unimportant' and 25 per cent that volunteers were neither 'important nor unimportant' to LINE delivery. There was some variation between hubs; views that volunteers were 'important' or 'very important' for LINE delivery ranged between 70 per cent in North Somerset to 47 per cent in Torbay.

School views within hubs on the relative importance of volunteers to LINE delivery in the baseline survey were mirrored by their views in the July 2015 survey (see Figure 44.4 below) on the extent to which volunteers have enabled more curricular LINE. 59 per cent of schools reported volunteers had made 'a bit' or 'a lot' of a difference, 33 per cent that volunteers have made 'no difference', and eight per cent reported 'don't know'. There was some variation between hubs, with schools reporting volunteers enabled 'a bit' or 'a lot' of a difference to LINE delivery varying from 73 percent in North Somerset, 71 per cent in Bristol, 60 per cent in Plymouth, 50 per cent in Cornwall and 30 per cent in Torbay.
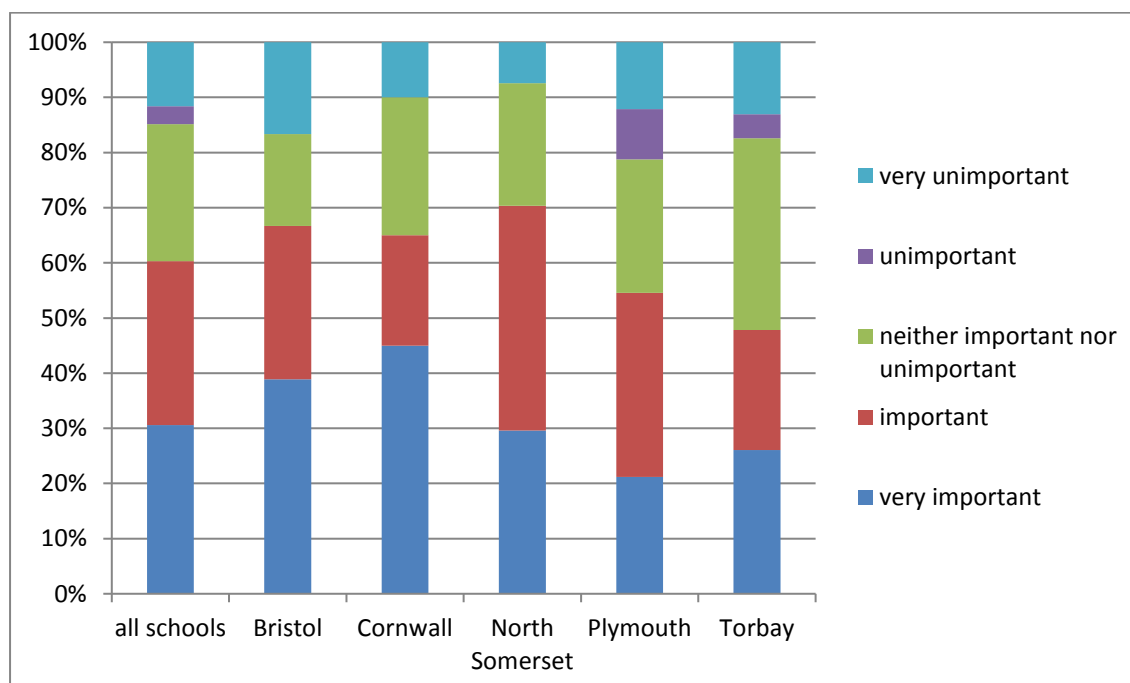
n=121: Bristol n=18, Cornwall n=20, North Somerset n=27, Plymouth n=33, Torbay n=23
Figure 44.3: Baseline data: how important are volunteers to LINE delivery

The proportional views across hubs remained relatively constant at the follow up survey in July 2015. The project's work on volunteering does not seem to have impacted significantly on changing these attitudes.
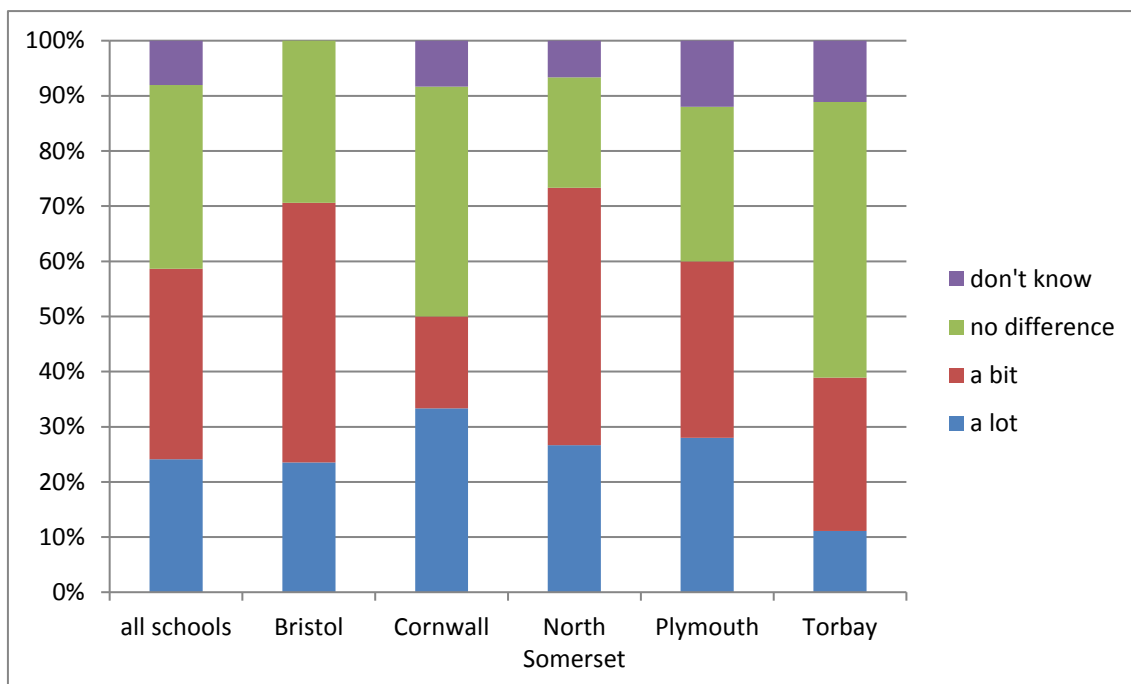
Figure 44.4: July 15: To what extent have volunteers' enabled schools to deliver more curricular LINE?

44.6 Volunteers' views

We had limited data from which to understand volunteer views. Schools did not prioritise encouraging their volunteers to complete the on-line volunteer survey, and volunteer availability did not often coincide with case-study visits.

Volunteer views were provided by
- Seven completed volunteer surveys
- 11 volunteer interviews

The main points from the returned volunteer surveys were:
- All respondents reported positive experiences in terms of being accepted in the schools in which they volunteered, but variable experiences in the support they received or the recognition they received from the school.
- Two respondents were dissatisfied with their volunteering experience, because of the lack of organisational support rather than the LINE work undertaken. One commented: *'Unfortunately, the school didn't contact me with any return details for the autumn term, so I suppose that they didn't feel I had much to offer. I have not volunteered for them since for this reason'.*

Four of the volunteer interviews were included in an undergraduate report[29] which identified the following key findings:

- Volunteer motivations included being a parent of a child at the school and holding a connection with nature which individuals wished to share with others, providing social interaction, helping a cause and developing skills.
- Practical barriers to volunteering included a lack of training and time. Developing workshops and training based upon the motivations listed above were recommended to overcome the identified barriers.
- Efforts to attract new volunteers should target parents at the school and individuals in either part-time employment or who were economically inactive.

These broad findings were confirmed by the remaining interviews, and the following additional points were raised.

- All volunteers reported positive experiences and personal satisfaction from working with children in schools.
- Most volunteers did not see themselves as exclusively LINE volunteers.
- Some volunteers felt a limited ability to instigate change when they were not part of the school hierarchy
- Staff did not always communicate the value of the volunteer role to their volunteers. A volunteer in one school felt that staff saw the volunteers' role as a '*nice extra*' rather than as essential part of what the school could offer.

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[29] DAVID BUCKLEY. Principal Motivations of Natural Connections Project Volunteers: A Pilot Investigation School of Geography, Earth and Environmental Sciences, Plymouth University.

KEQs 65 – 92. Natural Connections web service

Project element and objective	Assumptions
Web service: • Stimulate demand for LINE activities in schools • Support schools in building LINE into their planning and practices • Stimulate supply of LINE for schools	• The web service offers a 'one-stop shop' where schools can easily find the information and resources they need • The web service will foster a community of users that is instrumental in developing and delivering LINE services • The web service can play a role in raising the supply of LINE services by stimulating demand

KEQs 65 – 92 are covered by the following overarching questions

65.1 What was the nature of the planned project web service?

65.2 Did the Growing Schools website provide a one-stop shop where schools could easily find the resources and information they needed?

65.3 Did the proposed web service elements (Growing Schools website, social media and discussion forum) engage schools and LINE providers?

65.4 Did the web service foster a community of users that was instrumental in developing and delivering LINE services?

Data sources

Growing Schools google analytics, Twitter analytics, interviews with FACE C.E.O. and project IT consultant, hub leader interviews, school case studies, Natural Connections digital media review (March 2015)

Key points:

- The web service aims were not fulfilled as anticipated. It did not offer a 'one-stop shop' for schools, nor develop a community of users. The reasons for this included:
  - the need for a coherent and funded marketing strategy to increase use.
  - few teachers shared their materials on the project web pages.
  - the project's relatively short-time frame and lack of capacity for the necessary work to build a critical mass of teacher participants.
  - Hub leaders wanted local control over resources they would be recommending and over on-line communication channels
  - national website users were not drawn to the Natural Connections project offer.
  - the central team did not have the resources to play a central role in the national *Times Educational Supplement* outdoor learning discussion forum.
- Use of social media was more successful in engaging people in the project and LINE at local, national and international levels.

Notes: The development and delivery of the web service did not progress as anticipated and so reporting against some of the specific KEQs (e.g. KEQ 76: What are the patterns of the video and image library use?) are not relevant. The web service is considered as a whole in this KEQ.

65.1 Description of the project web service

The requirements of the web service were identified in response to insight research[30] as part of the Natural Connections project, in which teachers and school leaders reported that they would welcome a web based 'one-stop shop' for schools that would:
- support schools' access to suitable local green spaces and activities
- encourage the interchange of ideas and resources through the development of a community of practice
- link to guidance on other learning outside the classroom web sites
- point towards resources that were free or could be purchased, including LINE provider services.

Project plans, based on the tender requirements for the project, were that the web service would enable the development and delivery of LINE services through:
- a content-based website as a resource for teachers
- a discussion forum for teachers, LINE providers and others interested in LINE
- a range of social media to create 'buzz', signpost the website and forum, and encourage the development of a community of users.

- **A content based website**

The project partners with support from an IT consultant developed a tender brief for a national website.. Farming and Countryside Education (FACE), who owned and managed the existing Growing Schools (GS) website, were awarded the tender by Plymouth University in April 2013.

The GS website at that time had an emphasis on gardening and food production. The intention was to adapt and expand the existing Growing Schools website to cover all aspects of LINE including lesson plans, ideas for activities, a directory of LINE providers, events listings, case-study videos, and a database of locations for LINE.

Website development work was carried out by FACE and included:
- o redesigning the home page to signpost three distance-specific landing pages (School Grounds; Local Area: Trips and Visits); Key Stage and subject links for teaching resources; a search facility for local places to visit; outdoor learning support information; Growing Schools information.
- o creating a Video and Image Library

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[30] RICKINSON, M., HUNT, A., ROGERS, J. & DILLON, J. 2012. *School Leader and Teacher Insights into Learning Outside the Classroom in Natural Environments.* Natural England Commissioned Reports, Number 097.

- o creating a new directory for 'Local Support'
- o creating bespoke Natural Connections pages within the existing site
- o developing the user submission facilities for LINE provider details, school case studies, video links to YouTube and Vimeo
- o providing the ability to share information from Facebook, Twitter and Google+
- o checking broken links for existing external resources
- o tagging resources to make them more easily identifiable and retrievable.

The aims of the web site were therefore to become the 'one-stop shop' that fulfilled the tender brief of supporting schools' access to green spaces and activities; linking to other relevantweb sites; pointing to resources that were free or could be purchased, including LINE provider services; and providing a site for encouraging the interchange of ideas and resources, thereby creating a LINE community of practice. Part of the web service contract with FACE included the requirement to raise funds to test the potential for income generation as a contribution to the long-term sustainability of the site.

Once initial work on the website design was completed for the Natural Connections project launch in July 2013, the site was promoted directly to hub leaders and schools, and through general project communications such as the project Twitter account and newsletter, and via GS newsletters and e-bulletins. Schools were encouraged via hub leaders to submit resources in the form of case studies, lesson plans, learning experiences and links to other resources, including videos (see KEQs 15 and 20 for discussions on this). This resulted in an increase of visits to the GS website but this was not sustained (see Figure 65.1 below).

- • **A discussion forum for teachers and others interested in LINE**

Following the project investment in the web service, the decision was made not to launch a new discussion forum but to look for opportunities to build on interest in existing fora such as one managed by the *Times Educational Supplement* (TES); at the time the TES website had an outdoor learning section, and was undergoing a significant re-design and a change in management.

TES suggested that the GS resources with links to the TES website should be updated, and that the project should link the GS site to the 'outdoor learning resources' and the 'outdoor learning forum' to the TES site. This would have been a highly time-consuming exercise, for which the project had few resources and the decision was taken not to implement these modifications.

In addition plans for the project to become a TES 'featured partner' or contribute to the TES newsletters depended on the project regularly providing a high number of outdoor learning resources to the site and so were not developed. The project resource for the web service was mostly invested into the Growing Schools website, and providing learning resources through either central team input or teacher sharing proved unachievable to enable an enhanced partnership. TES site visitor numbers showed there was little activity, at the time,

on the outdoor learning forum, although interest on Twitter was increasing. The central team therefore discontinued efforts with the forum from July 2013, and focused from September 2013 on using Twitter as a means of promoting the project and engaging in discussion.

- **A range of social media to support teachers and signpost to a forum and website**

A Twitter account was set up (@ntrlconnections) in October 2012 to promote the project, create 'buzz' and signpost to the Growing Schools website. Multiple people contributed to the account, including a Plymouth University undergraduate student who had an internship with Natural Connections for a year (September 2013- August 2014). A Facebook page was also set up and managed by this student, but its use was discontinued as Twitter was found to be more effective in promoting project activities, and managing the Facebook page was highly time-intensive. A Natural England staff member took over responsibility for the Twitter account following the web service review in March 2015.

Following developments with GS website (see next section) and the end of the internship, social media use was reviewed in March 2015. The aim was to consider how best to use digital media for both current and legacy delivery. The review recommended a cross-platform presence with flexible products such as infographics and micro-videos alongside a collaborative approach with targeted communications. The use of a number of social media sites was investigated including Pinterest, YouTube and paper-li but there was insufficient capacity to generate enough content to service accounts on these platforms and it was decided to focus effort in two areas; the Twitter account was continued and a low-cost WordPress blog was launched in March 2015. The aims for this blog were to:

   o operate in the same way in terms of the collaborative model that was developed by Natural Connections
   o promote the project
   o raise awareness of good quality examples of both evidence and delivery in the field of outdoor learning, rather than to promote one project, organisation or school
   o feature articles from across the LINE delivery and research sectors.

65.2 Did the Growing Schools website provide a one-stop shop where schools can easily find the resources and information they need?

Figure 65.1 below shows key usage statistics for the Growing Schools website from June 2013 (the date of the launch of the updated website) to July 2014. Points to note include:
- The number of page views increased over the first year of the project to a high point of 16,914 between January 23rd – February 22nd 2014, before dropping off to 6,022 in the last month for which we have statistics (July 23rd – August 22nd 2014)
- The number of visitors, new visitors and returning visitors mirrored this pattern of increasing to a high point in January – February 2014 before falling away

- The average visit duration reached a high point of 4 minutes 29 seconds between October 23rd – November 22nd 2013 and then decreased over the course of the project. There was a slight increase of just over a minute in visit duration between July 23rd – August 22nd 2014.

These figures suggested that visitors were directed to the site through project promotional work, and that the new design encouraged visitors to explore the site. The reduction in the number of visitors and duration of visits over time, however, suggested that the site was not meeting their immediate needs.
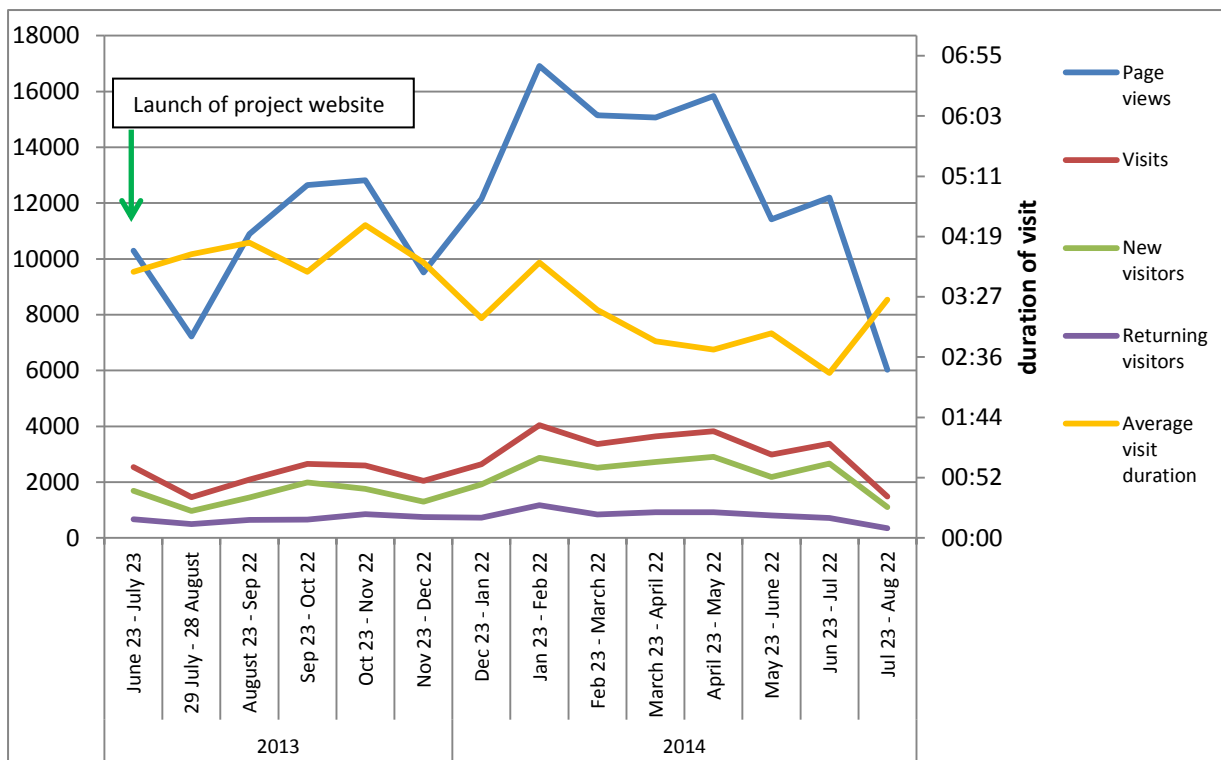
Figure 65.1: Key Growing Schools website statistics (June 2013 – August 2014)

Figure 65.2 below shows the overall number of website visits compared with the highest number of visits from project areas Plymouth and Bristol; if they featured in the monthly statistics, visits from areas in the other three hubs were largely in single figures. The key point to note is that visits from Natural Connections hub areas were a very small proportion of the total, reaching a high point of 13.6 per cent between Nov 23rd – Dec 22nd 2013.
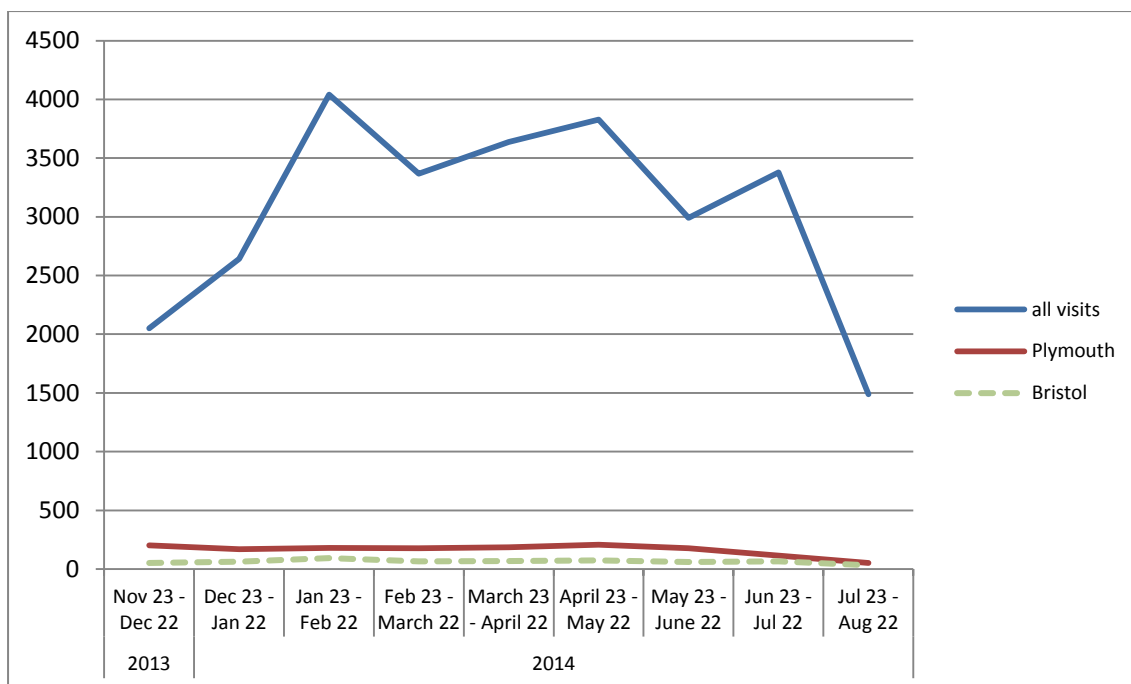
Figure 65.2: Number of visits by location (November 2013 – August 2014)

These figures for local participation in the site were reflected in feedback from hub leaders, schools and LINE providers that the site was not meeting local needs. By March 2014, concerns highlighted by project participants included:

- the navigability of the site. One hub leader reported that the general view from project participants and LINE providers in his hub was that the site was not intuitive to use and that using the site was slow because of the number of clicks involved in reaching the information required.
- the lack of quality assurance for site information, particularly of LINE provider listings.
- submitting information. Hub leaders reported that it could be difficult to submit information to the site, and there was sometimes a long delay between uploading information and it becoming 'live'.

At this time the central team identified the following issues:

- Feedback from hub leaders, schools and teachers was that teachers were hard-pressed for time and often lacked the confidence to share their resources beyond their local collaborations. This meant that creating and uploading resources for the GS website was not a priority. The effect was that the content for the website was not regularly refreshed, and that the site had limited dynamism.
- The very small number of schools that reported using the website in surveys (see Figure 65.3 below). During case-study visits schools that had active school gardens and an emphasis on gardening and growing sometimes reported that the GS site was useful, but those without gardens reported little use of or interest in the site. This links again to the relevance of content to teachers.

- The new curriculum, to be introduced from September 2014. This was creating a need for new, up-to-date resources that took into account the new requirements of the statutory curriculum.
- The need for additional resources to generate and support traffic to the GS site.
- The lack of income from the website. This represented an increasing cause for concern for its long-term sustainability.

All these experiences fed into the development by FACE of the new Countryside Classroom website. This aimed to become a one-stop shop for teachers that linked farming, food and LINE. In the light of the challenges in developing the GS website as the project's online presence and the development of this new website, the project ceased investment in GS from September 2014. Natural Connections then became a core partner of the Countryside Classroom site, providing some of the intellectual property from the GS site as its contribution to the partnership.
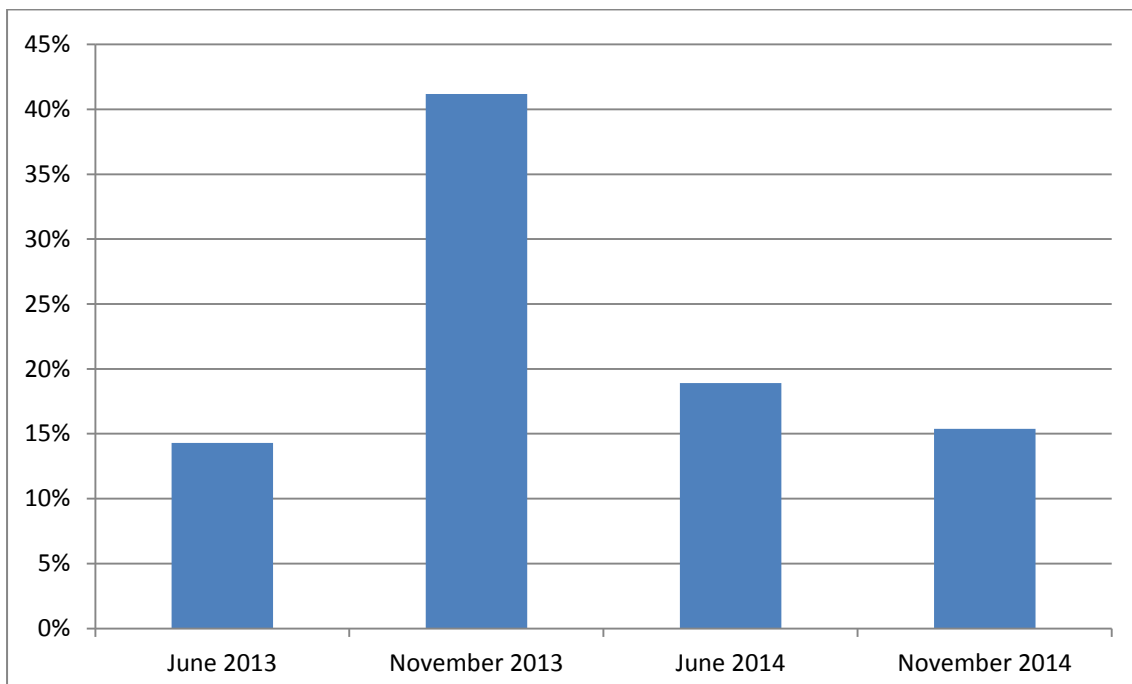
June 2013 n=7 schools, November 2013 n=17 schools, June 2014 n=37 schools, November 2013 n=39 schools.
Figure 65.3: Percentage of schools returning school activity log data that reported use of Growing Schools website

Ceasing investment in the GS website enabled the FACE C.E.O., the project IT consultant and the central team to evaluate the experience and collate learning points for the future development of the Countryside Classroom website. These included:
- The need for a robust partnership with aims and expectations that were aligned, involving clear communication between the partners. The partnership between FACE and the central team did not develop into an effective working relationship, partly because of the difficulty of linking an established national website with the local delivery of Natural Connections.

- Partnerships should include all stakeholders throughout the development of the website even if they are not directly involved in delivery of the site. This would ensure a strong collaborative relationship with joint aims and aspirations. This might have created a greater sense of ownership and responsivity to specific needs identified through the demonstration project. This was an approach taken in the development of the Wild Time for Schools App developed by the Bristol hub leader.
- Promotion and marketing needs to be strongly resourced. This would include further insight research into the detail of what teachers required from a website, a marketing plan and coordinated campaign. There was the recognition by partners that this would take '*serious time and money'* which was not available within the Natural Connections project.
- There should be a clear focus for any website. The devolved nature of the project focused on local events and therefore did not drive large volumes of traffic to the GS site. Most existing GS visitors came from outside Natural Connections areas, with the result that the aims of the Natural Connections project were unlikely to have been relevant to them at that time.
- Funding models need to be carefully designed. As part of a demonstration project the funding model for the web service tested the requirement for significant funds to be raised through the website. This fundraising was not achievable without building a critical mass of visitors so that potential contributors could be attracted. The timescale and budget of the project did not allow this, nor did it allow the testing of alternative subscription models.
- Building an online community of users for a website with a relatively small catchment across a time limited project can be highly challenging. Longer timescales with a clear common purpose, stakeholder collaboration and demonstrable utility to intended users are necessary to build and sustain a community of this type.

65.3 Did the proposed web service elements (Growing Schools website, social media and discussion forum) engage schools and LINE providers?

We have seen above the issues for the GS website around engaging schools and LINE providers, and that the project did not make use of a discussion forum. Following the review of social media use in March 2015, the project continued with the Twitter account and launched a low-cost WordPress blog. Both have been successful in promoting the project, and in generating interest in LINE at local, national and international levels. This success was supported by responsibility for coordination of social media and the blog resting with a member of Natural England staff working within the central team. After the departure of student intern, this had been shared among central team members, which had led to some fragmentation of effort.

- **The WordPress blog**

Most outdoor learning blogs are written by one individual or promote a single project, whereas the natural connection outdoor learning blog had a number of different contributors and guest bloggers. Writers for the project blog have included hub leaders, LINE organisations, researchers and teachers from across the country and around the world; it has hosted 21 guest blog posts from 18 bloggers (end February 2016), thereby adding variety and bringing access to the bloggers' networks. The blog became increasingly popular during the project lifetime; a recent research- and practice-based article on children's learning through Forest Schools became the most popular post published, with 756 views in two weeks. The blog also hosts the project newsletters alongside those from Council for Learning Outside the Classroom and Creative Star Learning, and more recently has uploaded reports from project case-study visits.

Visitors typically viewed two pages each and this has been fairly consistent across each month. At the end of February 2016:
   - 94 people have signed up to follow the blog
   - Total visitors: 3,550 from 26 countries
   - Total views: 7,200.

- **The Natural Connections Twitter account**

Twitter has been an effective means of promoting the project, and follower numbers have continued to increase, with 1,877 followers at the end of February 2016; a significant number for a project of this scale. 85 per cent of followers were based in the UK and 21 per cent of followers listed themselves as being based in South West England, 5 per cent more than any other region. The number of followers and levels of influence were affected by the relevance of tweet content to different issues, and by the level of influence of those who re-tweeted project content. For example when the environmental journalist George Monbiot posted a tweet about the project and more recently when DfE started to follow the account, there were sudden influxes of followers. Twitter was also an effective way to promote the blog, which was re-blogged and shared on Twitter by UKEdChat, an influential organisation with a wide reach into educational sectors. Outdoor learning sector organisations and stakeholders engaged well with the project on Twitter, frequently sharing content and tagging the project in features of interest; Tweets with photos or graphics generated substantially more interest than plain text Tweets. The central team also received invitations to contribute articles to practitioner or general-interest education publications through the Twitter feed. We have no data on the extent to which project schools were aware of and/or contributed to these online discussions, but individual teachers from around the country were a substantial part of the social media audience.

In addition to promoting the project, social media was helpful for the central team to 'listen' to those who were influential in education and environmental sectors, and more generally to demonstrate people's interests. This listening function enabled us to target individuals and identify popular topics to spread our messages more effectively.

65.4 Did the web service foster a community of users that was instrumental in developing and delivering LINE services?

Fostering a community of online users and encouraging them to be instrumental in developing and delivering LINE services turned out to be beyond the scope of this project for a number of reasons. These included:
- the need for a coherent and funded marketing strategy
- teachers' reluctance to share their materials on digital platforms (for a variety of reasons)
- the project's relatively short-time frame, which did not allow for the creation of a critical mass of teacher participants.

KEQs 93-100. Evaluation

Project element and objective Evaluation	Assumptions
• Stimulate demand for LINE activities in schools • Support schools in building LINE into their planning and practices • Stimulate supply of LINE for schools	• Project data feedback can help stimulate demand from schools • The evaluation was delivered in line with planned milestones • The evaluation provided information of the right quality to enable an informed assessment of the project's progress • The data collection instruments answered key questions set out in the framework

KEQs 93-100 are covered in the following headings:

93.1 What was the project's overall methodological approach?

93.2 What was the evaluation plan?
- Evaluation framework
- Research instruments
- Evaluation data collection and analysis methods

93.3 Was the evaluation programme (instrument development, delivery and analysis) in line with planned milestones?

93.4 What were the main challenges to the evaluation?

93.5 How and why was the evaluation plan modified during project delivery?

93.6 Did the data collection instruments provide the information that allowed the team to evaluate the project progress and shape ongoing and future delivery?

93.7 Did the evaluation plan and quarterly progress reports stand up to peer review?

93.8 What were the most significant impacts to monitor for LINE in schools?

93.9 How were these measured?

Data sources:

Evaluation framework; central team progress reports; KEQs.

Key points:
- The evaluation was successful in collecting, analysing and reporting on large amounts of data from a wide range of sources. It provided regular information that enabled a flexible, responsive approach to all elements of project delivery and delivered a summative report when the project was completed.
- The integration of the evaluation element within the central team was both a strength and a challenge. On the one hand it created valuable information that supported project implementation but on the other the additional time involved for participants could lead to them prioritising other, more immediate, aspects of project delivery.
- The evaluation framework was underpinned by 45 project assumptions and consisted of 100 key evaluation questions agreed between Natural England and Plymouth University.
- The main challenges to the evaluation were the perception in schools that the research was a burden; managing communication of research requests to schools to

- ensure they were not overloaded with project information and demands; the time taken in collecting data; accessing LINE provider, parent, pupil and volunteer views through survey instruments.
- Research instruments were modified in response to feedback from project participants, data analysis and project delivery and development.
- Use of the LINE Evaluation Form, which enabled schools to develop an action research approach to LINE, was discontinued in 2015 as few schools engaged with this type of research.
- The evaluation informed project delivery across the four elements and at all levels of implementation.
- The evaluation plan and progress reports were well-received by different groups of peers.
- The most significant impacts to monitor were the foundational aspects of pupil learning, pupil performance, teacher wellbeing and job satisfaction, and school culture.

93.1 What was the project's overall methodological approach?

The overarching aims of the project were threefold:
1. To stimulate the demand from schools and teachers for learning outside the classroom in natural environments
2. To support schools and teachers to build learning outside the classroom in natural environments into their planning and practices
3. To stimulate the supply of high quality learning outside the classroom in natural environment services for schools and teachers.

Project delivery was through a distributed model of responsibility that was carried out at four levels; central team, hub leader, beacon school and cluster school. The overarching aim of this brokerage model was to build a series of local networks in which schools that were already successful in LINE ('beacon schools') could support others ('cluster schools') in developing their LINE practice; the vision was one of sustainable LINE that was built on participation and collaboration, in which autonomous clusters of schools would continue to work together after an initial injection of funding and support from the project.

The evaluation objectives were to:
- Inform ongoing project design and delivery through monitoring progress, successes and challenges in all project elements
- Monitor the scale and scope of the project as it changed over time
- Evaluate the effectiveness of the structures and processes put in place by project teams in meeting the aims of the project
- Monitor selected impacts of the project on participating schools, organisations and individuals
- Monitor project outputs

- Monitor and report on the financial sustainability of the project brokerage model
- Monitor and report on the central team's targets related to income generation
- Capture the project learning in a final report in order to make evidence-based recommendations for the design of future programmes aimed at improving the supply, demand and simple evaluation of effective school-based LINE.

The complexity of the project, that had three aims, four elements and a distributed model of responsibility in five areas across the south west, meant that the most appropriate approach was mixed methods. According to Pommier et al (2010, p.3)[31] this approach '(1) provides strengths that offset the weaknesses of both quantitative and qualitative research; (2) provides more comprehensive evidence for studying a research problem than either quantitative or qualitative research alone; (3) helps answer questions that cannot be answered by qualitative or quantitative approaches alone; (4) encourages researchers to collaborate; (5) encourages the use of multiple worldviews or paradigms; (6) and is 'practical' in the sense that the researcher is free to use all possible methods to address a research problem'. The research design was that of triangulation (Pommier et al, 2010); its purpose was to obtain complementary data from different project sources in order to understand the project's design, delivery and impact as fully as possible, and to ensure the validity of findings, analysis and recommendations.

We wish to thank all project participants for their generous support for the evaluation.

93.2 Evaluation plan

The evaluation plan was embedded from the start of the project; as Lendrum and Humphrey[32] argue, interventions rarely proceed precisely as planned, and a detailed understanding of process, both for programme-specific reasons and for a broader understanding of how these processes affected project outcomes, was essential for this complex project. At the same time, close monitoring of project implementation allowed us to provide formative feedback to:
- the project funding bodies of the Department for the Environment, Food and Rural Affairs, Natural England and Historic England via regular reports to the Project Board. These reported on all aspects of project delivery, although throughout the project there was a strong focus on the lessons learned for future project replication and amplification. Natural England has also used project findings and recommendations for advocacy for LINE with high-level policy makers.
- the central team. The evaluation team collected data on all elements of the project and reported findings to team meetings, aiming to maximise the impact of the

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[31] Pommier, J., Guevel, M.-R. & Jourdan, D. (2010) 'Evaluation of health promotion in schools: a realistic evaluation approach using mixed methods'. *BMC Public Health*, 10:43.
[32] Lendrum, A. & Humphrey, N. (2012). The importance of studying the implementation of interventions in school settings. *Oxford Review of Education*, 38(5), 635-652.

- project's different elements and delivery mechanisms, and to take alternative action if a particular element of the project was not working as expected.
- hub leaders. The aims for this feedback were to give hub leaders an accurate overview of LINE activity in their hub through reporting school levels of investment in LINE in each hub and each case-study school's LINE activities, and to share successful practice from other hubs.
- schools. Feedback on project and hub levels of LINE activity enabled schools to place their own activity within the context of the overall project. Schools that requested particular survey findings (such as class LINE activity or pupil response to LINE) were sent individual reports.
- the wider outdoor learning and education communities. Project findings were disseminated in seminars, conferences, through practitioner and academic journals, and through project newsletters and social media. The aim was to promote both the project and LINE as a means of engaging people with enjoyable, sociable types of learning outdoors.

The summative feedback was the final report, which captured the successes and challenges of the project and made recommendations for future replication and amplification. The data has provided valuable longitudinal evidence on the mechanisms for supporting sustainable LINE and strong evidence from a relatively large number of project schools (n=87) on their perceptions of the impact of LINE.

An important consideration in the research design was that the demands of the evaluation should be easily manageable for schools to ensure that they return all the information that was needed. Encouraging schools to participate in research and evaluation in the current English educational environment can be problematic; they are subject to multiple performative pressures and have to be convinced that there is a 'low risk of interruption to the central work of the school'[33], defined as raising standards in external examinations. As James[34] comments in her reflection on the difficulties of balancing research rigour with practical constraints, this often has the result that contributing to research 'is a marginal activity for most teachers and schools'. We were therefore careful to take note of any issues with data collection, and made modifications to the evaluation instruments during project delivery in response to feedback from project participants (see Section 5 for further details).

- **Evaluation framework**

An evaluation framework was devised by the central evaluation team, with input from an external consultant, in order to present and visualise the evaluation plan. The framework consisted of a set of research questions that were agreed between Natural England and Plymouth University (see NECR215 annex 1 - appendix 2). The framework was underpinned by 45 project assumptions (e.g. that there was a latent demand for LINE in schools that the

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[33] Maguire, M., Perryman, J., Ball, S. & Braun, A. (2011). The ordinary school – what is it? *British Journal of Sociology of Education*, 32(1), p.2.
[34] James, M (2006). Balancing rigour and responsiveness in a shifting context: meeting the challenges of educational research. *Research Papers in Education*, 21(4), p.372.

brokerage element of the project can stimulate) which generated 100 questions that could systematically test each of the four project elements (brokerage, volunteering, web service and evaluation) against the three project aims (to stimulate demand, support practice and stimulate supply of services). This was designed to capture the scale, scope, processes and impacts of the project.

- **Research instruments**

Surveys were used to capture the scale, scope and impact of the project at school level, and interviews/case studies to collect details of processes through capturing central team views, hub leaders' work and views, and school-level views on LINE activities and project support. School-level interviews also collected further data on the impact of LINE. Google analytics were used to monitor web site use, and Hootsuite to manage and monitor social media. Interviews were conducted with the website C.E.O. and the project IT consultant when project investment in the Growing Schools website ceased.

The research team introduced action research for schools in the PATOL (Priorities Assessment Tool for Outdoor Learning) in which schools were encouraged to link their aspirations for LINE with actions and outcomes. As few schools engaged with this type of research, largely because of capacity issues, its use as an evaluation instrument was discontinued in 2015.

Table 1 below shows the final version of the different research instruments and their contribution to the evaluation as a whole.

Table 1: Research instruments

	BROKERAGE	VOLUNTEERING	WEB SERVICE	EVALUATION
SCALE	- hub leader (HL) interviews - school surveys - LINE provider survey	- HL interviews - school surveys - school activity log - school case studies	- school activity log - Google analytics - Hootsuite	central team instruments
SCOPE	- HL interviews - school activity log - school profile information - LINE provider survey	- HL interviews - school activity log - school case studies - volunteer survey and interviews	- school activity log - school case studies - Google analytics - Hootsuite	central team instruments
PROCESS	- HL interviews - school surveys - school case studies - central team instruments	- HL interviews - school case studies - central team instruments	- central team instruments - FACE interview - web consultant interview	- HL interviews - school case studies - central team instruments
IMPACT	- HL interviews - school surveys - school activity log	- HL interviews - school surveys - school activity log	- HL interviews - school case studies	HL interviews

	school case studies • pupil and parent surveys • LINE provider survey	• school case studies • volunteer survey and interviews	• Google analytics • Hootsuite	• school case studies

Figure 1 below provides an overview of the way in which the evaluation instruments worked in practice to deliver the research required by the evaluation framework.
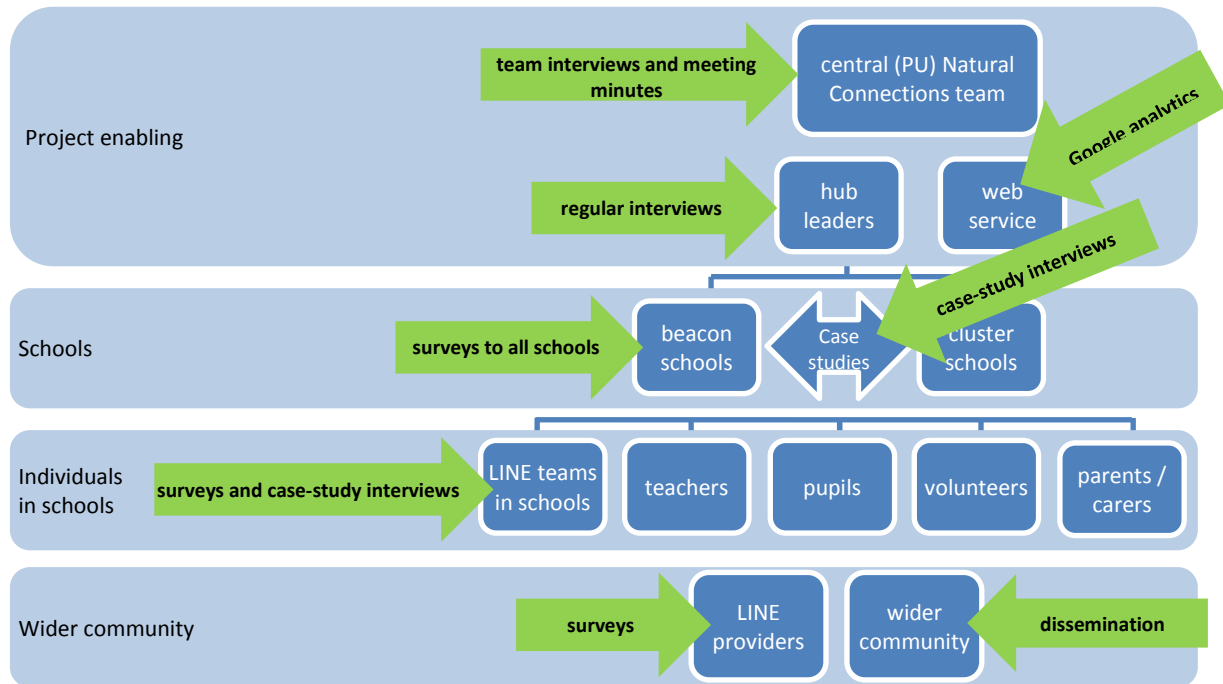
Figure 1: Overview of evaluation instruments and participants

- **Evaluation data collection and analysis methods**

Data was collected over 2½ years and consisted of:

- o 3,083 survey returns from 15 surveys to schools, volunteers, LINE providers, pupils and parents. School survey return rates are shown in Table 2 below.
- o 35 semi-structured interviews with hub leaders
- o 24 case-study visits to schools that included semi-structured interviews with 119 school staff, 11 LINE volunteers and 167 pupils
- o notes and minutes from 52 central team meetings; 16 central team staff interviews
- o monthly website analytics; semi-structured interviews with the Farming and Countryside Education C.E.O. and the project's web development consultant
- o Department for Education performance tables
- o internet searches for school documents and information

Surveys were initially hosted on a bespoke website as generic survey software did not have the complexity needed for recording some school data, such as that required by the activity log. As the evaluation requirements were simplified, however, the evaluation team found that

SurveyMonkey offered greater flexibility in adapting surveys to project feedback. All survey data collection was transferred to SurveyMonkey by December 2014.

Quantitative survey data was cleaned and then given to the International Centre for Statistical Education (ICSE) at Plymouth University, where the statistical tests were carried out. All survey data was used to calculate the proportions for comparison between different survey points; this approach was taken to ensure that no data was discounted and that comparisons were possible, as information was not available on all schools at the different survey points. Pearson's chi-squared test was used to assess changes in proportions over the course of the project. For the 'change in time spent on LINE' calculation, a non-parametric (Mann-Whitney U test) was performed on the baseline and May 2015 median time spent reports. The significance threshold for all tests was set at 0.05.

Interviews were conducted face-to-face, then transcribed and written up into templates designed to capture the information needed for the evaluation. These were quality checked within the evaluation team. Using NVivo qualitative data analysis software, interview and qualitative survey data were then auto-coded to the relevant KEQs for detailed thematic analysis. Specific points for consideration that arose from the interviews were used formatively to review interview schedules prior to subsequent interviews. This process is illustrated with reference to the hub leader interviews in Figure 2 below.

In practice not all KEQs were answered as stand-alone questions. Some became redundant as the project progressed; for example 'What are the patterns of the video and image library use?' became irrelevant as this element of the web service was not developed. Other KEQs were amalgamated to provide a better analysis of the issues surrounding certain elements of the project such as volunteering. This was because the role of volunteers was flexible and inconsistent, and did not develop in the linear way that was anticipated at the project outset. The final count of separate KEQ documents was 36.

For the final versions of each KEQ document, the coded data was downloaded from NVivo into Microsoft Word; one researcher produced a draft summary analysis, followed by peer review from a second researcher to provide an agreed draft which was circulated to the whole central team for quality assurance and additional input. Any comments were reviewed again by the evaluation team and the final draft completed. All KEQ documents were then proof checked and standardised for consistency. The relationship between the outputs from the research instruments and the KEQs is shown below in Figure 3. The final version of the KEQs contributed the substantive content for the final report, which provides a broad overview of project development, challenges, successes and learning points.
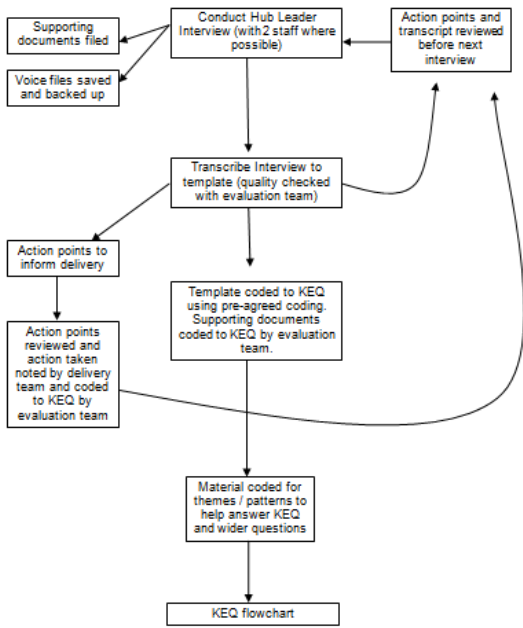
Figure 2: Hub leader interview system

- Supporting documents filed
- Voice files saved and backed up
- Conduct Hub Leader Interview (with 2 staff where possible)
- Action points and transcript reviewed before next interview
- Transcribe Interview to template (quality checked with evaluation team)
- Action points to inform delivery
- Action points reviewed and action taken noted by delivery team and coded to KEQ by evaluation team
- Template coded to KEQ using pre-agreed coding. Supporting documents coded to KEQ by evaluation team.
- Material coded for themes / patterns to help answer KEQ and wider questions
- KEQ flowchart

Figure 3: KEQ flow chart

- Data collection instruments reviewed to collect 'missing' data
- KEQ data collated in NVivo from pre-coded data sources
- Data sources searched and relevant sections coded to KEQ
- Material reviewed
- Material coded for themes / patterns to help answer KEQ and wider questions
- Information missing that means KEQ cannot be answered. Return to NVivo and data sources
- Summary for each KEQ "answering" the question
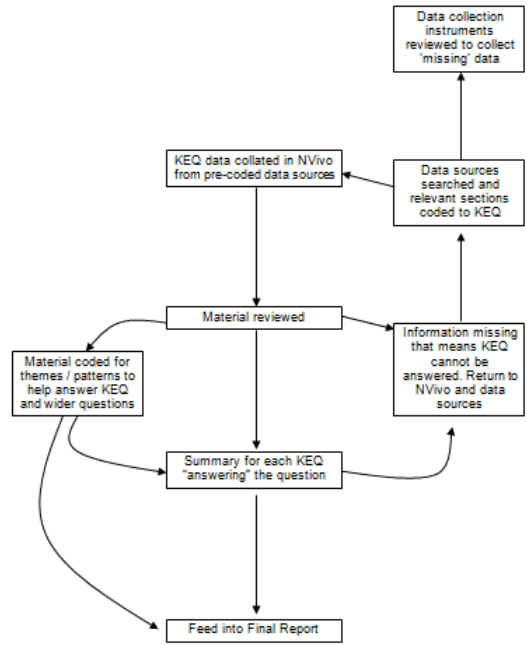- Feed into Final Report

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Table 2: Evaluation return rates for all instruments by hub

Hub		Baseline Survey	Activity Log June 13			Activity Log November 13			School Survey December 13			Activity Log June 14			School Survey July 14			November 14 Activity Log - secondary not asked			May 15 Activity log replacement			School survey Jul 15		
		completed surveys	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate	requested	submitted	return rate
Bristol	Beacon	7	0		n/a	7	5	71%	0		n/a	7	4	57%	7	2	29%	7	4	57%	7	3	43%	7	6	86%
	Cluster	11	0		n/a	0		n/a	0		n/a	6	0	0%	1	0	0%	11	3	27%	18	2	11%	18	11	61%
	Total	**18**	**0**		**n/a**	**7**	**5**	**71%**	**0**		**n/a**	**13**	**4**	**31%**	**8**	**2**	**25%**	**18**	**7**	**39%**	**25**	**5**	**20%**	**25**	**17**	**68%**
Cornwall	Beacon	7	0		n/a	6	5	83%	0		n/a	7	6	86%	7	6	86%	4	3	75%	7	5	71%	7	5	71%
	Cluster	13	0		n/a	0		n/a	0		n/a	1	0	0%	1	1	100%	11	4	36%	13	6	46%	13	7	54%
	Total	**20**	**0**		**n/a**	**6**	**5**	**83%**	**0**		**n/a**	**8**	**6**	**75%**	**8**	**7**	**88%**	**15**	**7**	**47%**	**20**	**11**	**55%**	**20**	**12**	**60%**
North Somerset	Beacon	6	0		n/a	0		n/a	0		n/a	6	6	100%	2	2	100%	5	4	80%	6	3	50%	6	4	67%
	Cluster	21	0		n/a	0		n/a	0		n/a	5	2	40%	0	0	n/a	15	4	27%	21	3	14%	21	11	52%
	Total	**27**	**0**		**n/a**	**0**		**n/a**	**0**		**n/a**	**11**	**8**	**73%**	**2**	**2**	**1**	**20**	**8**	**40%**	**27**	**6**	**22%**	**27**	**15**	**56%**
Plymouth	Beacon	7	7	7	100%	7	7	100%	7	7	100%	7	7	100%	7	6	86%	6	5	83%	7	5	71%	7	7	100%
	Cluster	26	0		n/a	0		n/a	0		n/a	16	7	44%	12	7	58%	24	5	21%	26	9	35%	26	18	69%
	Total	**33**	**0**		**n/a**	**7**	**7**	**100%**	**7**	**7**	**100%**	**23**	**14**	**61%**	**19**	**13**	**68%**	**30**	**10**	**33%**	**33**	**14**	**42%**	**33**	**25**	**76%**
Torbay	Beacon	6	0		n/a	4	1	25%	3	0	0%	6	5	83%	6	4	67%	6	6	100%	6	3	50%	6	6	100%
	Cluster	17	0		n/a	0		n/a	0		n/a	6	1	17%	0		n/a	7	1	14%	19	5	26%	19	12	63%
	Total	**23**	**0**		**n/a**	**4**		**0%**	**3**	**0**	**0%**	**12**	**6**	**50%**	**6**	**4**	**67%**	**13**	**7**	**54%**	**25**	**8**	**32%**	**25**	**18**	**72%**
Total	Beacon	33	7	7	100%	24	18	75%	10	7	70%	33	28	85%	29	20	69%	28	22	79%	33	19	58%	33	28	85%
	Cluster	88	0	0	n/a	0		n/a	0	0	n/a	34	10	29%	14	8	57%	68	17	25%	97	25	26%	97	59	61%
Grand Total	**Total**	**121**	**7**	**7**	**100%**	**24**	**18**	**75%**	**10**	**7**	**70%**	**67**	**38**	**57%**	**43**	**28**	**65%**	**96**	**39**	**41%**	**130**	**44**	**34%**	**130**	**87**	**67%**

93.3 Was the evaluation programme (instrument development, delivery and analysis) in line with planned milestones?

The evaluation plan (programme) was linked to the project delivery plan. As the delivery plan was modified in response to project development, so the evaluation plan was updated to track delivery progress appropriately. Instruments were developed initially and then refined in response to feedback as the project progressed (see Section 5). Analysis was ongoing to inform project delivery, but was finalised once data collection was complete (July 2015) through writing up the KEQs.

93.4 What were the main challenges to the evaluation?

There were a number of different challenges to the evaluation:

- The perception that the research was a burden, particularly at school level. This was for two particular reasons:
  - **Initial project demands** on hub leaders and schools meant that the evaluation seemed relatively unimportant in comparison with the effort required to initiate, develop and support LINE in schools. However the second Torbay hub leaders experiences in recruiting schools from November 2014 suggested that a more personalised approach would support higher survey data returns; she completed the baseline survey with each school, using it as a school audit for LINE and the basis of a LINE action plan for future development. This personalised approach was reflected in a high school survey return in July 2015 of 72 per cent (n=25: see Table 2 above).
  - **The centralised approach** taken by the evaluation framework meant that much of the information generated was useful at project and hub level rather than at school level. The limited relevance of the evaluation data to school-level practice may have caused schools to question its value and reduce their engagement with the process. However schools expressed their appreciation of feedback from the case-studies as they showed examples of LINE in action and its impact; this suggests that school-level evaluation such as action research offered by the PATOL might offer more relevant information that could be fed back relatively quickly to other schools if initiated as part of project set up.
- The **size and complexity of the requirement**, particularly at school level. This was scaled down when hub leaders and schools requested that the number and size of research instruments should be reduced.
- The **time taken in collecting data**. Creating, distributing and delivering the evaluation instruments, chasing returns, transcribing interviews, entering data into qualitative analysis software, analysis and writing reports on the large number of key evaluation questions was immensely time-consuming; during the July 2015 school survey period, for example, all schools were e-mailed at least once and over 60 schools were phoned directly, many of these a number of times, to request and

support survey completion. As this was a demonstration project an extensive evaluation was essential to understand the project processes and to make recommendations to inform future delivery. Future project delivery would benefit from fewer, shorter evaluation instruments.

- Managing **communication of research requests** and evaluation findings to schools alongside other central team and hub leader information, so that schools did not become overloaded with requests and/or information.

- Accessing **LINE providers' views**. The diversity and number of LINE providers within the project area and the difficulty of compiling a project-wide list resulted in poor responses to LINE provider surveys (18 and 15 per cent respectively). In addition, Natural Connections project and LINE provider expectations differed; project aspirations for sustainable models of LINE in schools and limited funding for additional support encouraged more in-house provision, while LINE providers possibly expected a greater demand for their existing services, which may have resulted in lower engagement with the project than was anticipated.

- Accessing the **views of parents, pupils and volunteers**. Returns from these surveys were poor (parents 63; pupils 448 from nine schools; volunteers seven). Schools were asked to post the survey links onto their websites; the response was variable, and the degree to which schools promoted the surveys was generally limited. Nonetheless those schools that supported this part of the evaluation were keen to know the results for their own use, which suggests that these surveys could be introduced as part of an evaluation toolkit to support each school's LINE development.

93.5 How and why was the evaluation plan modified during project delivery?

Modifications to the evaluation instruments were made during project delivery in response to:

- **Feedback from project participants**
  o School survey frequency was changed from termly to annually. This was partly in response to the perception of the evaluation burden reported by schools and the consequent low return rates, and partly because schools were not seeing change on a termly basis. This meant that termly surveys were not capturing useful information.
  o School activity log was changed from termly to twice a year. Again this was in response to the evaluation burden reported by schools; twice a year still allowed the recording of seasonal variation in LINE activity.
  o Modification of survey answer choices and activity logs in response to school requests to simplify the response process.
  o Finance questions were removed from school surveys. Schools were sensitive about disclosing information on their budgets and this factor was had an impact on survey returns.

- o Pupil Premium questions were removed from school surveys. This was to reduce the length of the survey and because the data was publicly available.

- **Project delivery and development**
  - o Hub leader interview frequency was reduced from quarterly to termly in order to capture change more efficiently because hub leader contact with schools was based on terms rather than calendar months.
  - o The web service developed in a different way to the one expected, making some aspects of the evaluation framework irrelevant; the KEQ on use of the video library was discarded, for example, as this aspect of the web service was not developed.
  - o LINE provider follow-up surveys and interviews were not completed. This was because the LINE provider element of the project did not develop in the way anticipated; schools took time to develop their practice and many chose to focus on in house provision, though there were some examples of successful partnerships between LINE providers and schools.
  - o The PATOL was discontinued because schools were at the limit of their evaluation capacity. However it is possible that the PATOL would have been more widely used if it had been introduced as the principal form of evaluation and at the right time to link with the development of the school LINE action plan, possibly as the school was completing its baseline survey.
  - o All but one volunteer interview were carried out during case-study visits. This was partly because of the very small number of volunteer survey returns (seven), but also because it was not possible to match volunteer availability with evaluation team capacity outside the case-study visits.

- **Data analysis**
  - o Interview schedules and survey questions were changed in response to ongoing data analysis. Examples included separate questions on school CPD in the hub leader interviews to achieve greater understanding of this process, and reducing the number of questions about CPD in the school surveys, as the evaluation did not need the level of detail first requested.

93.6 Did the data collection instruments provide the information that allowed the team to evaluate the project progress and shape ongoing and future delivery?

This section focuses on understanding how the data informed central team decisions and contributions from other project participants.

Central team
Updates on evaluation progress and findings were provided to the central team through summaries of all surveys, progress reports, graphs of data analysed, and thematic collation

of information from across the data as requested by hub leaders, schools and central team members (for example on health and wellbeing and financing LINE in schools). This information was discussed by central team members as part of their weekly meeting agendas, leading to action points and delivery priorities. Selected examples of evaluation informing delivery are set out below by project element:

- **Brokerage: school recruitment and engagement**
  - Hub leader feedback resulted in the dropping of the MoU which was becoming a barrier to the recruitment of (in particular) cluster schools. The Cornwall hub leaders thought that the MoU *'to schools that are just coming on board, seems a pretty heavy document'.* The MoU was rewritten and subsequently presented as a statement of commitment.
  - Hub leader concerns on the role of LINE providers and quality assurance of their services led to the Natural Connections central team facilitating local LINE provider meetings in Plymouth, Cornwall and Torbay hubs; Bristol and North Somerset had facilitated a forum for schools and providers early in the project. The meetings were able to act as a bridge between schools and providers and to provide clarity about the aims of the project and the implications for those involved.
  - The central team enabled the sharing of good practice across hubs, for instance through
    - the first hub leaders sharing their criteria for beacon school selection with others
    - market place networking meetings for schools and LINE providers
    - hub leader bulletins organised geographically and thematically.
  - Understanding of the recruitment process, its speed and the number of schools in each area informed the decision to expand recruitment beyond two hubs' local authority boundaries (North Somerset and Torbay).
  - Altering of the format for hub leader interviews to include a catch-up meeting with the delivery team allowed two-way feedback between hub leader and central team.
  - Hub leaders were keen to know how other hubs were progressing and to understand how their own work fitted in with developments elsewhere in the project. These requests informed the development of hub leader meetings.

- **Brokerage: CPD and LINE Providers**

The first LINE provider survey highlighted a lack of understanding between schools and LINE providers (see KEQs 30-34 for more details). This led to the development of a LINE providers' CPD survey which, in turn, informed a central team LINE CPD action plan that was delivered during the project. Examples of CPD opportunities that were subsequently offered to LINE providers included:
  - 'LINE and the New Curriculum' event in June 2014

   o Market place networking events, seminars and conferences held across the region that brought teachers and providers together, for instance the 'Walk the Talk' Conference in July 2014

   o Fundraising training workshops.

In addition LINE providers were offered advertising space in the project newsletter to give them greater opportunities to reach a wider audience for minimal costs.

- **Volunteering**

Feedback from hub leader interviews on the lack of momentum around engaging with volunteers in schools, together with central team discussion on the nature of the volunteer role, informed the decision to use some of the remaining resource for local volunteer projects to be delivered by hub leaders in Bristol and Plymouth. Bristol hub leaders spending time in learning how volunteer groups in the city operated and how to match them to schools rather than expecting schools to self-generate volunteers, while Plymouth hub leaders worked with a group of volunteers who specifically supported LINE in project schools on local greenspace. This information provided detailed understanding of the needs and challenges of schools engaging with LINE volunteers. These issues are discussed fully in the volunteering KEQ.

- **Web service**

Analysis of the web site and social media analytics, and feedback from hub leaders and schools allowed the central team to understand the strengths and weaknesses of the web service and make decisions on its future. These are discussed fully in the web service KEQ.

- **Evaluation**
  - o Hub leaders reported in their early interviews that there was a lack of clarity around the evaluation requirement for schools. In response the research team provided simple overviews of the research requirement, aims and timetable for hub leaders to distribute to schools.
  - o Data collected from hub leader interviews, case studies and school surveys and logs were used to modify what was asked of participants to encourage higher return rates and ensure information collected was relevant to a developing project; for instance the baseline survey was changed to simplify the format and reduce the amount of information requested.
  - o Originally there was no formal mechanism in place to feed project information back to hub leaders. This prompted the research team to develop summary templates for all school data collected so that hub leaders had regular and accessible reports on project progress.

Hub leaders

Data summaries were fed back to hub leaders from all school surveys and activity logs, together with case study summaries for schools within their own hubs. The central team

offered to present data in any other ways that the hub leaders thought were useful, and produced individual thematic summaries of information from across the dataset on volunteering, health and wellbeing in schools, school LINE funding models, CPD, issues around the LINE lead role, children's connection with the natural world, challenges to LINE by hub and schools' use of LINE providers. Hub leaders reported that they valued the information provided and used this data to inform hub leader team planning conversations and decision making.

Initially the Plymouth hub leaders were not clear about the evaluation and concerned that there was no formal mechanism in place whereby information on LINE activity that was collated by the central team was fed back to them. This prompted the central team to produce clear and accessible evaluation information, timetables and the data summaries. The latter were particularly appreciated; for instance in response to the summer 2015 survey infographic, the Torbay hub leader responded '*Thanks for this. Love the way you presented findings, pity we can't do a 2017 "2 years on" data drop as I am sure the cause will continue to flourish'*.

Hub leaders appreciated the way that the central team reduced the school evaluation requirements as the project progressed. However the first Torbay hub leaders felt that the initial evaluation requirement of schools was inappropriate for the scale of project and level of support that schools were receiving, and continued to have concerns about the evaluation during their involvement both in terms of scale and relevance to schools. They were also concerned about the effect that regular requests for information might have on their local reputation. The second Torbay hub leader was supportive of the evaluation, and used the baseline survey when recruiting new schools to the project as a LINE school audit and the foundation for a school action plan. They expressed none of the previous hub leaders' reservations.

Schools
Schools were provided with summaries of the school survey instruments, and case study schools were provided with a summary of the visit to their school (See Table 2 above for school return rates). A few schools were highly interested in the quantitative summaries and requested individualised information relating to their own institutions. In addition dissemination events were attended by school staff, with the result that specific information and learning points were taken back to participating schools. There is no project-wide data for how these different forms of information were used to affect school policies or practice.

93.7 Did the evaluation plan and quarterly progress reports stand up to peer review?
Overviews and specific elements of the evaluation plan, evaluation framework, data collection instruments, progress reports and findings have been presented to a range of audiences with interests in LINE policy, delivery and research. The central team experiences a high level of interest in the project. Presentations have almost always led to probing

questions and wide-ranging discussions on all aspects of the project. Selected reports and presentations have been delivered at:

- **Natural England LINE Strategic Research Group**
  - Evaluation framework (May 2013)
  - Interim findings (July 2015)
  - Final report (May 2016).
- **Conference presentations at**
  - British Education Research Association Conferences, September 2013, 2014, 2016
  - International Outdoor Education Research Conferences, November 2013, July 2016
  - Learning Outside the Classroom Conference, December 2014.
  - European Conference on Educational Research, September 201, 2015
  - International School Grounds association conference, September 2015
  - International Conference on Elementary School Teacher Education, October 2015
  - Royal Geographical Society conference, September 2015
  - ESRC Festival of Social Science 2015: Natural Connections Key Findings Conference, November 2015
  - International Outdoor Learning Conference: Lessons from Near and Far, July 2015
  - European Outdoor Education conferences 2013, 2014, 2016
  - International Council on Education for Teaching, July 2016
  - International Values in Education Conference, July 2016.
- **Presentations at Outdoor and Experiential Learning Research Network (OELRN) meetings**
  - Evaluation framework
  - Interim findings
  - LINE Evaluation Form methodology
- **Presentations at Natural Connections project board meetings**
  - Progress reports
  - Discussion papers
  - Interim findings
- **Peer-reviewed publications**
  - Edwards-Jones, A., Waite, S. and Passy, R. (2016) Falling into LINE: school strategies for overcoming challenges associated with learning in natural environments (LINE). *Education 3-13*, DOI: 10.1080/03004279.2016.1176066.
  - O'Brien, L., Ambrose-Oji, B., Waite, S., Aronsson, J. & Tighe, M. (2016) Learning on the move: green exercise for children and young people. In: Barton J, Bragg R, Wood C and Pretty J (eds). 2016. *Green Exercise: Linking Nature, Health and Well-Being*. Routledge/Taylor & Francis, Oxford.

- o Gilchrist, M., Passy, R., Waite, S. and Cook, R. (2016) Exploring schools' use of natural spaces. In C. Freeman and P. Tranter (Eds), Risk, Protection, Provision and Policy. Vol. 12 of T. Skelton, T. (Ed), *Geographies of Children and Young People*. Springer, Singapore.
- o Aronsson, J., Waite, S. & Tighe Clarke, M. (2015) Measuring the impact of outdoor learning on the physical activity of school age children: The use of accelerometry. *Education and Health*, 33(3),
- o Waite, S., Passy, R. and Gilchrist, M. (2014). Getting it off PAT: researching the use of urban nature in schools. In: E. Backman, B. Humberstone and C. Loynes (2014) *Urban nature: inclusive learning through youth work and school work.* Stockholm: European Outdoor Education Network, pp.35-49.

93.8 What were the most significant impacts to monitor regarding LINE in schools?
The impact of LINE in schools is discussed in detail in KEQs 4, 5, 7, 9 10 and 12. Those aspects that were believed to be the most significant by project participants and the evaluation team were:

- The **foundational aspects of pupil learning**. KEQ 4 shows how teachers reported that LINE can lead to children's increased confidence, self-esteem, social relationships, motivation to learn, perseverance, behaviour, health and wellbeing, and ability to cope. Case-study interviews showed the importance of the affective in children's learning, and interviewees emphasised how children need to be interested and stimulated by their learning if they are to achieve. These views were reflected in children's interviews, in which they all reported engagement with and excitement in learning outside. These are valuable findings in the context of increased pupil stress[35] and pupil disengagement with learning[36].

- **Pupil performance**. While the survey responses showed that 57 per cent of responding teachers believed that LINE had a positive impact on children's attainment, many case-study interviewees spoke of greater conceptual understanding achieved through LINE and of higher-quality work that children produced when learning outside. Interviewees from two case-study schools that had been involved with LINE for a number of years reported that the measurable rise in their children's attainment was underpinned by LINE activities. Although it is difficult to establish cause and effect from one approach in institutions that are aimed at encouraging children to learn, the response from interviewees in many schools suggests this is an avenue worth pursuing.

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[35] YoungMinds (2015) *Teachers express concern about students' school stress,* http://www.youngminds.org.uk/news/blog/3024_teachers_express_concern_about_students_school_stress.
[36] Hutchings, M. (2015) *Exam Factories? The impact of accountability measures on children and young people*, https://www.teachers.org.uk/files/exam-factories.pdf.

- **Teacher wellbeing and job satisfaction**. This was a finding from the research, with 72 per cent of respondents agreeing with the statement that LINE had a positive impact on their health and wellbeing, and 69 per cent agreeing that their professional development and job satisfaction were improved through LINE. In their exit interview, hub leaders from one area referred to LINE as a *'lifeboat'* from which teachers have been able to say *'this project connects with what I really believe in about education'* – that is, to engage and excite children with their learning rather than focus primarily on test scores. This was reflected in the teacher survey comment that 'LINE has kept us sane in an increasingly mad, mad educational world'. These views suggest that LINE, if widely supported and practised within schools, could ameliorate the current crisis in teacher recruitment and retention[37].

- **School culture -** the school approach to and investment in teaching and learning outside. KEQ 4 shows project schools' changing levels of investment in LINE, and KEQ 12 focuses on the different ways that schools were embedding LINE within everyday practice. KEQ 25 shows that increased levels of demand for LINE can be sustained, at least within the relatively short timeframe of the Natural Connections project, and KEQ 27 shows schools' staff attitudes to LINE. Together they suggest that school culture can be shifted towards one that embraces LINE as part of children's learning, evidenced as above. Monitoring school LINE culture could potentially be an important part of future LINE research work.

93.9 How should these be measured?
The experience of the Natural Connections Demonstration Project suggests that these four aspects of LINE can be measured in the following ways.
- **Foundational aspects** of pupil learning. The PATOL provides a framework for linking school aspirations, actions and outcomes for LINE, and encourages action research in each individual school. Each school devises its own measurements for its own particular actions (such as improving literacy), and can refer to the impact measurement tools document brought together by the evaluation team for validated methods. The final PATOL document summarises the school's LINE activities and their impact, providing a short and accessible document for overall project evaluation.

- **Pupil performance**. The PATOL measures the impact of school LINE activities, which will be closely linked in many cases to pupil performance.

- **Teacher wellbeing and job satisfaction.** These could be measured through the survey instrument developed by the project team. Interviews with teachers would provide greater insight into and understanding of the processes involved

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[37] National Audit Office (2016) *Training new teachers, https://www.nao.org.uk/wp-content/uploads/2016/02/Training-new-teachers.pdf.*

- **School culture.** A proxy for school culture was provided through the 'school attitude' question devised by the evaluation team (see KEQ 27) and supplemented by measuring school investment in LINE (see KEQ 4). This involved six short questions on teacher involvement, TA involvement, LINE CPD attendance, LINE documentation, funding spent on LINE and structural changes to school grounds.