Co-productive research in a primary school environment: un-earthing the past of Keig

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In the introduction to this book, Vergunst and Graham argue that heritage is 'about relationships created through inquiry; between past, present and future, between people and between people and things'. Here we explore the how this definition of heritage challenges attitudes and beliefs in relation to what school is for and the nature of curricula. Archaeology in the school-based community opens up possibilities for learning beyond the limitations of a content-driven model of learning. This chapter also considers the impact of the historical investigations carried out by children as heritage interpretation in the wider community.

We present a contextualised case study of work carried out in a small rural primary school in North East Scotland. This work saw a community-based landscape researcher whose commitment to the full engagement of non-experts in the planning, investigating and dissemination of landscape research being taken up by a head teacher, her staff and pupils. Participants recognised and valued the strength of putting children in charge of shaping what and how they learn. The experiences of all concerned resonate with Margaret Carr's argument that 'education is an ontological project,' because it is not just knowledge and skills which are generated but also 'shifts and developments in identity' (Carr, 2007: 42).

Elsewhere in this book discussion of community and co-produced heritage research have problematized issues of power in relation to knowledge, skills, decision making and voice. In this chapter, ways of knowing through co-production and enskillment are explored through the narrative of a school investigating the history of their village with the support of landscape researcher, Colin Shepherd, a head teacher, Jane Murison, along with her staff and pupils at Keig Primary School, and a lecturer from a School of Education, Liz Curtis. Using this material we argue that the Scottish Curriculum for Excellence (Scottish Government, 2004) is brought into being as a dynamic lived experience for all participants.

The on-going nature of the work discussed here is significant. It began in 2011 as an element of the *Bennachie Landscapes Project* (see Vergunst et al., chapter 1) that grew to incorporate a series of AHRC Connected Communities projects. These explored the nature as well as practice of work co-produced by the Bailies of Bennachie community group and academics from the University of Aberdeen.

Social relations thus play a key role in understanding the way in which the work has unfolded. A previous paper on this project highlighted how learning in schools is both situated and socially produced and that the context in which learning happens matters (Curtis, 2015). Ingold's idea of dwelling, further developed as 'meshwork' (Ingold, 2000; 2011),

and Bourdieu's notion of habitus (Bourdieu, 1977) provide a particular perspective from which to reflect on the experience of participation and on the unfolding nature of learning. Learning, when viewed as dwelling, is part of the everyday process of living in the world, of being in places with people and doing things together. As archaeologist Chris Tilley has argued, 'places gather together persons, memories, structures, histories, myths and symbols' (Tilley 2004: 25). Learning, from this perspective, is not about the transmission and receipt of a preformed standardised knowledge content within the formalities of the classroom, but rather a dynamic co-production of knowing and feeling through the immediacy and directness of encounters with people, objects, earth, weather and documents (Ingold, 2011). This kind of practical knowledge is very relevant to discussions of heritage. Laurajane Smith (2006) has questioned the understanding of heritage as a noun, which encourages the past to be taken at face value as presented by others. Instead, Smith argues that a heritage is best thought of as a verb; something which is enacted through sets of practices. From this point of view the past is brought into being through the actions and thoughts of people in the present in relation to their engagement with places, artefacts, documents and stories of the past; not a given thing but a temporal process.

From the perspective of the landscape researcher and head teacher the Keig project was designed to evaluate the practicality of using the principles of co-productive archaeological research to support children in leading their own historical investigation, while relating to the design principles and learning outcomes and experiences in the Curriculum for Excellence (CfE) (Scottish Executive, 2004). Specifically the Keig project set out to explore whether:

- children aged between five and twelve years could generate new and original historical research.
- such research carried out within the school might leach out into the wider community and generate greater concern for the local cultural heritage.
- such research could achieve genuine educational benefits for the children involved.
- such research might engender greater social cohesion within a rural community.

Curriculum and pedagogy

Between 2004 and 2008, the Scottish Government launched the *Curriculum for Excellence (3-18)* into all state primary and secondary schools in Scotland (Scottish Executive, 2004). During the time between its launch and introduction into schools, the Scottish Executive and later Scottish Government issued a series of underpinning guidance through five *Building the Curriculum* documents (2006-2011) which set out and explained the new architecture for learning and teaching for all of the subject areas of the curriculum. In their characterisation of the *Curriculum for Excellence*, Priestly and Humes, (2010) have argued that a close reading of the underlying architecture of this curriculum highlights a

tension between core elements of the curriculum which actively encourage and support the development of a process based and child centred approach to learning within a broad framework and those elements of the curriculum which are more instrumental in nature and outcomes based. In either reading of the curriculum there is scope for both teacher and pupil to create the contexts in which they learn, and specifically in relation to this chapter there are specific aims for children which are closely met through the experience of working with an archaeologist and researching the past of the area in which the school is located. What is key to the richness of learning discussed in this chapter is that the head teacher of the school in this project is committed to the idea of 'Curriculum as process and education as development' (Priestly and Humes, 2010: 346).

In the first of the 'Building the Curriculum' documents the then Scottish Executive stated that*:* 'It is important for children and young people to understand the place where they live and the heritage of their family and community' (Scottish Executive, 2006: 38). How school leaders understand and facilitate the ways in which children explore and interpret the 'heritage of their families and community,' (Scottish Executive, 2006: 38) is highlighted by Jane's account of how she and her school came to be working with Colin:

> "Our gut feeling was this is something really exciting, a great opportunity to work with an expert on real life research and we thought the historical and practical archaeology would be the main learning outcomes of the project. We really had to have a bit of faith as it was a very open ended learning experience and steep learning curve for us all. We all had to be prepared to 'suck it and see' as we couldn't predict the *Curriculum for Excellence* Experiences and Outcomes covered in this learning."

This focus on children and young people's understanding of the places in which they live and the heritage and culture which shapes their experiences of family and community emphasises the role of curriculum as a means of providing a platform from which children can play an active part in shaping their identity. Writing in the context of the New Zealand national curriculum, Te Whariki, Carr points to the way in which identity is embedded within it, and in particular the nation's aspiration for early years children that they have the opportunity to, 'grow up ….secure in their sense of belonging and in the knowledge that they make a valued contribution to society' (NZ Ministry of Education, 1996: 9, cited by Carr, 2005: 42).

Similarly, in *Building the Curriculum 3* The Scottish Government (2008) actively encourages schools to work in partnership with people and organisation from the wider community and to have the 'freedom to think imaginatively about how the experiences and outcomes might be organised and planned for in creative ways which encourage deep, sustained learning and which meet the needs of their children and young people' (2008 :20). This invitation to think imaginatively and creatively in

relation to how and what children learn is reflected in Jane's reaction to Colin's invitation to develop a child led archaeological project next to her school:

> "Keig School became involved in this Bennachie Landscapes project when a wee voice popped up and said, "Remember me from a former life?" That was Colin - archaeologist and Dad of a former pupil at another school. Inspired by the thought of a trowel, memories of Time Team and potential headlines in the *Aberdeen Press and Journal* of: 'Keig School Roman Vase fetches £1 million in auction', the whole Keig School Team: P1-7 pupils, teachers, PSAs and parents climbed on board." (Jane)

Unearthing the past at Keig

In the following part of this chapter we describe the process of supporting children to investigate the archaeology of a small area of woodland near to their school. Research carried out on '*place-responsive pedagogy*' (Mannion et al., 2013) is relevant here, which is also underpinned by Tim Ingold's notion of 'dwelling' (2000) where the 'natural and cultural are intermingled and co-emergent'. and from the perspective of 'curriculum-making: as a lived experience,' (Mannion et al., 2013: 794). Curriculum-making is a key part of understanding the process through which Jane, Colin and Liz worked alongside each other and pupils and staff to design frameworks which children could take ownership of the archaeological and historical investigation. Mannion et al. identify that 'significant adults' including teachers and other community members can 'play a vital role in longer-term effects on proenvironemental behaviour,' (ibid: 795). This is borne out by the experiences of children carrying out archaeological investigations in the same woodland area that they regularly went to for forest school activities.

Elsewhere Curtis has argued after Cooper (1995) for the importance of embodied learning in relation to making sense of time, (Curtis, 2015). In this project, learning involves understanding the world from a different, archaeological perspective through working alongside Colin and learning the skills of trowelling back the soil, collecting, cleaning, identifying, sorting and interpreting finds. Outdoor learning plays a regular part in the lives of all of the children and staff at Jane's school. All children spend at least one morning a week learning out of doors at all times of year and in all weathers. As a small school in a rural location the children are fortunate to have an extended area of woodland within easy walking distance of the school. This commitment to regular and sustained outdoor learning could be seen to fall into what by Beames and Ross have characterised as 'outdoor journey pedagogies'. Central to these pedagogies is a shared responsibility for the planning and carrying out of learning between teachers, pupils and other adults. They identify three phases of negotiation between children and teacher: questioning, researching and sharing, (Beames and Ross 2010). These three phases are also central to Jane's conceptualisation of curriculum as process and

of Colin's commitment to participatory archaeology in the community. Additionally, Jane's autonomy as head teacher of a small school played a key role in the way in which she created the time and space needed within the children's school week to work directly with Colin.

Fieldwork

[Figure 9.1 here]

Initial scoping had recognized archaeological features within a short walk (approx. 200m) of the school. An initial 'grid' 10m x 10m was laid out and the children with teachers and parent helpers proceeded to excavate the site, layer by layer. Any finds were bagged and XY co-ordinates noted with reference to the site grid. The children were responsible for plotting, labelling and bagging their own finds. These were later cleaned, analysed and recorded on a University of Aberdeen pro forma finds sheet by the children. They worked to recognized university archaeological research standards.

In tandem with this work, groups of three or four pupils were taken out in turn to survey other archaeological features within the wood. This involved laying out linear baselines using only ranging poles and tapes and setting out survey grids along the baselines. This was done using tapes and Pythagoras' 3,4,5 theorem. The pupils then plotted in the features on drafting film over a grid, recording the features using topographical symbols, such as hachuring for slopes.

All age groups were able to engage in most of the work, though the more physical excavation did prove difficult for the primary ones and twos. However, they did not want to be left out so special, shorter periods were factored in to introduce them to the practice. It was quite eye-opening (as well as eye-watering) to observe primary ones and twos analyzing pottery fragments and deciding on vessel type (flatware, hollow-ware, cup, teapot etc.), fabric (redware, whiteware, stone-ware etc.) and surface treatment (glazed, unglazed, creamware, pearlware, sponge-applied, hand-painted, transfer-printed etc.). This was done as a class discussion with a show of hands to vote on each aspect of each piece of pot. It was time-consuming but very rewarding to hear them, at a later date, telling their parents about the finds in such detail. The older ones worked in pairs to write the descriptions and fill in the finds record sheets.

It is interesting to note that, at the end of the last school year, the pupils who were leaving had experienced weekly archaeology and landscape studies for their entire seven years of primary school and probably left with more practical experience than most university graduates in archaeology. On a site visit to one of the excavations run as part of the Bennachie Landscapes Project, the older ones were able to consider the site in the light of their own hands-on experience and were able to discuss the stratigraphic relationships within the site, consider the fabrics of some of the finds with a discerning eye and to comment upon the archaeological strategies employed.

Of particular interest was the line of a former lade (artificial water-course) leading from the Keig Burn to a sudden drop overlooking a further minor water course. This suggested a third, previously unknown, mill site laying between the Upper and Lower Corn Mills of Keig. The aim of this part of the project was to discover more about the construction and date of this mill and to try to understand how it functioned within its modified riverine landscape. The project succeeded in demonstrating that this had been a short-lived sawmill dating to the first two decades of the 19th-century and was possibly constructed to prepare timber from the estate for the reconstruction of Castle Forbes at that time. The lade fed the mill wheel which drove the saw. The latter was housed in a timber building constructed on large stones straddling the secondary water course. This was used to clear away the sawdust from the mill into the Keig Burn.

Children leading the way into the past

At all stages of the children's historical enquiry with Colin they were given the opportunity work with primary source material including historical documents and fieldwork. They had real opportunities to pose informed questions and to offer informed analysis of what they found. In the later stages of their work, the children worked with staff from the University Museum and Liz to curate their own exhibition of their findings for parents and members of the local community during parent's evening. This also resonates with research carried out in Sweden of high school teachers' perceptions of the potential of learning outdoors (Fägerstam, 2014). Fägerstam contextualises her study within the concept of 'Uteskole,' (2014: 57). Drawing from Jordet, (2010) she points to the underlying principle which characterises learning outdoors within the context of Uteskole: not only that 'the school surroundings are used as a *learning arena* but also as a *source of knowledge*' (2010: 57). Head teacher Jane summarised her and the children's experience of this:

> "The field visits and digs went very well although in abysmal weather conditions and we dug up an extraordinary amount of 'treasure'. 'Colin come and see this!' became the cry and Colin spent his time dashing from find to find sharing his enthusiasm and excitement. New skills in archaeological excavation, working as a team (without standing on anyone else's cleared patch of ground!) and careful examination of the tiniest find to check for significance were only some of the many skills learned." (Jane).

The experience of children and adults of direct encounters with the past through the physical process of surveying and subsequently excavating in the woodland resonates with Mannion et al's notion of the intermingling of culture and nature as part of place-responsive pedagogies. Jane reflects on the way in which the weekly experience of going to the dig site with Colin and working in abysmal weather points to the children's resilience. This was borne out by one of the six year old children who on reflecting on a photograph of her and her classmates

digging out ‘treasures’ from the ground described to Liz how she ‘liked drawing and copying the pottery. I enjoyed digging, cos we found lots of pottery but I didn’t like the rain but the next time we did it, it was sunny. I learned how it was for people in the old days,’ (Curtis, 2015: 46). The social also plays a key role in relation to Carr’s idea of identity building. When the children were carrying out practical archaeological work such as surveying or excavating and sorting finds, so too were the other adults. When children were digging in all weathers so was their head teacher, parent volunteers and Colin and Liz. This experience affords the possibility for children of seeing familiar people in unfamiliar learning roles and learning new skills from Colin together with adults. Working with Colin as part of a team, learning to not to stand on somebody else’s cleared patch of ground, to carefully examine the tiniest find to check for significance were learned as archaeological practices and as part of the process of creating heritage. Jane recalls that “one of the most memorable moments was when one pupil who was determined to find something discovered a piece of what we now know as 13th-century pottery. I was not sure who was more thrilled – the child or Colin” (Jane).

Jane reflected that the children were also able to put forward their own theories to where the mill might have been based on the finding of large stones, the positioning of the lade and the finding of an extraordinary amount of old domestic finds in a large widened area of the lade – ‘The Midden’. “The children were convinced this was the site of the old mill but Colin was more wary and preferred the theory of the mill being further up the bank. However, after further excavation the pupils seem to have been proved right!” (Jane). This reflects, as also noted in Beames and Ross (2010), the positive impact of valuing children as competent beings, as able as any of the adults to pose purposeful questions, to make informed decisions and to interpret evidence. It also clearly demonstrates why it is important that children as shown in this chapter are given opportunities to work with primary sources of historical evidence and to take an active role in planning and carrying out excavations, collecting and sorting evidence and interpreting it to create their own historical narratives.

Valuing children’s understanding from the field to the classroom

Jane, Colin and Liz all held a similar view with regard to respecting the findings from the archaeological work which the children carried out. This is reflected in Jane’s emphasis on creating the conditions in which children can be the leaders of their own learning, Colin’s emphasis on enabling the children to develop practical skills in archaeological investigations and to publish their results alongside adult archaeological reports and Liz’s use of the University of Aberdeen’s Collector’s Cabinet to house the pupils’ exhibition (a facsimile of one made for King Gustavus Adolphus of Sweden in 1632). Through the creation of a temporary exhibition of the findings of their investigation on a school parent’s evening and through the more permanent publication of their findings the children have shared their work with their families and local community and a wider audience

interested in local heritage.

[Figure 9.2 here]

As a teacher educator specialising in history education and located at the University, Liz situated herself in the classroom as an additional teacher with the role of working alongside adults and children alike to create an exhibition of the children's investigations in the collector's cabinet. Later in this chapter, Colin refers to the different levels of production and presentation afforded to professionals and to school children when showing the results of their work. This is also an issue which Aberdeen University Museum needs to negotiate and the loan of the collector's cabinet to schools is one way of readdressing such imbalances, even if in a temporary and fleeting manner. With the loan of the cabinet came the opportunity for the children and their teachers to visit the University and take part in a workshop on collecting for museums and creating exhibitions. Jane recalls that:

> "As part of the project the children visited 'The Cabinet' at King's Museum in Old Aberdeen. They were clearly mesmerized by the secret compartments and hidden drawers. The cabinet with its seventy-five drawers and cupboards became a focal point and we decided to display our research, dig finds and learning in an Open Evening Exhibition for parents and the community using the Cabinet."

As a result of their experience of being at King's Museum, the children were able to use their learning experience to create their own exhibition and putting their learning into action in a real experience: real life assessment. Jane set up the initial planning session for the exhibition as a whole school activity in which pupils from a mixture of year groups worked together to create a mind map of the aims and content of the cabinet. The planning and creation of the cabinet exhibition by the children in the school reflects the third stage of the outdoor journey pedagogy approach, 'sharing'.

Colin was aware that children's work, unlike professional archaeologists, is rarely illustrated by professional illustrators and that thuis could lead to the children's work not being valued as highly. To readdress this Colin ensured that the results were portrayed using the same graphic software as would be used to publish a professional report. The findings of the children's research are alongside the work of adults in the publications of the Bennachie Landscapes Project, in the same format and to the same standard so that the children's work is indistinguishable to that produced by a professional archaeologist. Colin argues strongly that in its low-cost school environment the results represent an equal research value, irrespective of the educational and social benefits.

As a result of this work the school introduced an 'Archaeological Responsibility Group' where the pupils lead the learning for the school and report back. This group meets every second Friday and the group is made

up of children who have a special interest in archaeology and have selected it as their Responsibility Group. Their achievements have included finishing washing, sorting and cataloguing the finds to date and writing reports for publication (in Shepherd, 2013) and for school displays. On the non-Responsibility Group Fridays, research with the upper stages class includes continued study of the landscape history of the surrounding area. One particular useful primary source is the 'Barony Book of Forbes'. This court record was used to help imagine local life in the 17th century and to understand the social environment of the time. The children chose to produce an historical 'comic cartoon' based on the exploits of the people as recorded therein. Pupils considered their own family names and, although not all originate in the village, the discussions led to a better understanding of genealogy in general. Trips to the local churchyard led to the recording of gravestones and a recognition of the range of social history contained in that source. Various 'lumps and bumps' and dyke stonework were also discussed as evidence relating to the developmental change of the graveyard itself. The graveyard setting resulted in a useful discussion concerning what societies have done with their dead from Neanderthal times to present.

The nature of inquiry which underpins the conception of heritage in this book allows for the possibility of the past being a catalyst for 'future-making,' (this volume: 1). This is reflected in what has subsequently grown out of the original archaeology project. More recently the school has acquired a former trophy cabinet which enabled the Archaeology Responsibility Group and the new P4–P7 class to put together the first exhibits for the School Museum. Jane reflected that she had a distinct feeling of déjà vu as the current pupils replicated the intense discussions and enthusiasm of the 'Cabinet Exhibition' and was heartened that the ownership of the project was still very much the children's:

> "The discussions were very intense and the reasoning and explanations put forward highlighted to me the incredible journey wehave made from the start of this project to date. The pupils were articulate, confident, creative and willing to risk putting forward their ideas. It is maybe also a reflection of our school's journey with CfE as well as archaeology".

The trophy cabinet is now transformed into a display case which now stands in the school foyer that doubles as the local community hall foyer. A selection of finds have been displayed in an innovative way, rather than simply utilising a 'museum-case' format, the children have treated the finds as 'art' and created small 'installations' of grouped objects whilst also noting their provenance.

Learning for the school

In the following section Jane reflects on her and staff and pupils' evaluations of what they have learned through the ongoing process of historical investigation.

The archaeology project at our School has enriched the education of all the pupils far beyond learning the craft of archaeology, the local history and changes to the landscape. Pupils have used primary sources to research information, have located places on maps, have participated in archaeological digs and followed the process from surveying the site, to cataloguing and displaying their finds. The skills they have used span the whole curriculum and have given them a real-life experience for developing their literacy and mathematical learning. All our pupils are very proud that they are unearthing the past of our village and a pride in the new discoveries they have made about the local area.

However, they have also learned to be open-minded and creative. They have developed their natural curiosity by asking questions and leading their own learning. The impact of the project goes beyond the obvious formal learning as pupils have developed their skills in communication, co-operation and team work and of course have been able to experience the outdoor, local environment. It has also helped them to take responsibility for their learning and the area of the site. We see this project not as a one-off event but as a sustainable and long-lasting enhancement to the education of the pupils at our School. This, in turn, they share with their families and the local community.

Yes, pupils, staff, parents and the community have learned more about the local area and landscape. Discovered more about the past – how people lived, the part objects played in their lives. Discovered the fascination of finding a piece of pottery and researching the find to discover how old it is and where it came from. Yes, we learned more about museums, presenting information and putting on an exhibition. We learned more about archaeology itself, the techniques, how to know where to dig, how to research parish records.

We have all learned to be open-minded about learning, to be creative, go with the flow, allow pupils to lead the learning. But maybe, more importantly, we have learned more about how our pupils learn, more about how projects like these can inspire and motivate even the most reluctant learner, how learning can truly be across and through the curriculum, allowing learners to explore their learning in a safe and real situation. And also, that a bit of mud and rain does no harm. So, what now? Where do we go from here?

Each year we plan roughly where the project is heading and how we are going to achieve this. We negotiate time and groupings and ideas and plans. It is a learning experience for all of us. We have integrated archaeology into our curriculum and as part of the learning at our School. Our next steps are to include this in our school rationale and re-visit the part it plays in our overall curriculum. We are hopeful for the continuation of our project for the next few years at least.

Next session we have plans to continue surveying and excavating, continue establishing our museum and of course continue finding out about the old mill at Puttachie. We might not have found a million pound Roman vase but have discovered the educational equivalent. What format the project takes, where our learning is going, how we learn about the

past, how we continue with our excavations? Well, it is up to our pupils – it is their dig after all. What we do know is that we want it to continue as we still have a lot to learn.

Recalling the visit of one of the Council's Quality Improvement Officers, Jane reflects on the surprise of the Officer at the level of involvement and responsibility which the children between the ages of 5 and 12 achieved through their participation:

> "We were determined to continue excavating the mill site and have planned digs every year for various groups of children. It has moved from whole class digs to group digs as the site areas are more specific and smaller. As part of this work pupils undertook extensive site surveying and astounded Colin Shepherd with the accuracy of the eyes of youth. One of Aberdeenshire Council's QIO officers came to experience a dig for herself. Despite having to borrow wellies and socks (I did warn her it was muddy) she revelled in the experience and declared that this was what Curriculum for Excellence was all about."

Colin writes from an archaeological perspective:

As noted in the introduction, the Keig project was designed to evaluate the practicality of using a framework based upon principles of co-productive research within a primary school setting and to help answer a range of questions. These are now briefly considered.

Can children aged between five and twelve years could generate new and original historical research? The answer is clearly yes. The children use the recording and analysis sheets generated by the University of Aberdeen for their archaeological research project. The site surveys have been carried out by the pupils to a remarkable degree of accuracy across a difficult woodland terrain. The results were portrayed using the same graphic software as would be used to publish a professional report. And herein lies an important caveat. Children's work is often presented in a method of production accessible to themselves in their school environment. Few professional archaeologists produce their own graphics for publication. They usually rely upon third party professionals to carry out that work. By using the same approach, the children's work is indistinguishable to that produced by a professional researcher. The main difference resides in the time required to produce the results rather than the end results themselves. In the world of paid/funded research, the timescales taken for the children's project would be untenable. In its low-cost school environment the results represent an equal research value, irrespective of the educational and social benefits.

Does this research achieve genuine educational benefits for the children involved? The project has permitted a practical application for many, if not all, curricular subjects. Place-name analysis has resulted in assessments of Pictish, Gaelic, Scots and Latin formative elements in the generation of local farm names. Linguistic skills have been handled.

Discussion of the physics and chemistry behind radiocarbon-dating was prompted by the discovery of 11th century carbonised grain at Druminnor. Digging leads to the observation of the biological world of worms, beetles, larvae and other creepie-crawlies and these, inevitably, engender discussion. The numerical number-crunching and mental gymnastics required to convert pounds, shillings and pence, acres roods and perches, to contemporary equivalents for statistical analysis clearly underlines numerical accommodation. The list could go on to cover geography, history, comparative religions (not only faith-based), politics, sociology to eventually finish up in the world of art history and graphic presentation. There are clear educational benefits.

Clearly, the situation at Keig has been helped by a community member turning up at the school on a weekly basis to help. That has provided a focus for the activities which might otherwise fall victim to a wide range of other competing projects.

> "I feel a little bit like the school mascot – the school's 'resident archaeologist'! Joking aside, I advise a bit and relate a few stories but it is very much the school that makes the project decisions. And Jane makes sure that means the children, not herself and the other teachers." (Colin)

Reflecting on Jane's comments above in relation to her experience of the visit from her Quality Improvement Officer and Colin's discussion of the children's capacity to significantly engage in the whole process of an archaeological investigation including reporting on their findings Liz writes on the wider educational significance of the Keig project:

A current concern of the Scottish Government in relation to children's education is the growing attainment gap in educational outcomes particularly in relation to literacy, numeracy, health and well-being between the children from the most and least affluent homes in Scotland. At the time of writing The Scottish Government has just launched the National Improvement Framework and Improvement Plan (2018), which in the words of John Swinney, MSP, Deputy First Minister and Cabinet Secretary for Education and Skills:

> 'Tackling inequity is at the heart of the Scottish Government's education reform agenda and there is a collective responsibility to ensure continuous improvement for children and young people…..Decisions that shape the education of children and young people will be made in classrooms, schools and establishments, by those working with learners, their parents and communities' (Scottish Government, 2018:3)

The drivers of the National Improvement Framework to reduce educational inequalities and to 'poverty proof' educational outcomes for children is important and vital. However with the drive for 'continuous improvement' (ibid) comes an imperative to measure children's progress against nationally agreed benchmarks which recalls Priestly and Humes'

paper (2010) discussed above in relation to the tensions between the underlying principles of CfE which encourages process based learning and a more metrics-based instrumental approach to learning which sometimes accompanies the need to measure continued improvement. What Jane has demonstrated through reflections on the evidence for children's confident development and use of a wide range of literacy and numeracy skills embedded in the archaeological work including reading, report and label writing, talking and listening, measuring and working with data which the children undertook. Likewise the children's reflections on their experiences of learning through photo elicitation points to the ways in which they developed team working skills, learned to negotiate, to listen to others and exchange ideas in relation to developing their initial exhibition and latterly their school museum all of which reflect outcomes for Health and Well-Being.

The learning however is not restricted to the pupils and staff in the school. Through the process of team teaching Liz has drawn from her experiences of working alongside pupils, teachers and Colin in the creation of a new course for Primary Education students, 'Making History' which enables student teachers to develop the skills and dispositions to develop similarly creative and child led local history investigations themselves as teachers in the future.

Learning for the community

The overall aim of the Bennachie Landscapes Project is to attempt to lay down the foundations of an inter-disciplinary community and university research collaboration that has the resilience to be inter-generational. There are no over-arching research goals other than to explore any or all aspects of the natural and built heritage of Bennachie and its surroundings and to utilise those findings for the benefit of present and future inhabitants of the area. A number of nested projects are operating both on the hill and in the surrounding communities. The results are shared around the area in a variety of formats which are co-ordinated by the Bailies/University of Aberdeen partners. The Keig School project is important as it provides one such focus within one of the parishes abutting the ridge of Bennachie.

As noted above, the Keig project links to the wider one in a variety of ways. Help has been afforded by adult members of the Landscapes Fieldwork group in aiding manually-difficult aspects of the digging. The wider project has enabled the school's results to be spread to a wider audience through its publications. The printing of posters has helped to present the findings within the school and in a local heritage museum. The school has, conversely, provided valuable new research results concerning its portion of Bennachie which has helped to further the aims of the wider project. Perhaps more importantly, it has demonstrated that a school with vision can produce original research and that the pupils can become educators within the community. Education does not have to be a uni-directional, top-down process:

> “Time plays an important part in Keig’s explorations. Most ‘professional’ research is carried out under time constraints imposed by funding limitations. At Keig there are no time constraints but, also, few cost constraints. Research can take as long or short a time as is required. Herein lies a potential strength that a ‘community way of doing things’ can bring to co-productive partnerships.” (Colin) [The Bailies pay for Colin’s mileage and this is a pattern followed for other volunteers acting for the Bennachie Landscapes project.]

Another important factor has been the open-ended access to the woodlands of the Forbes Estate by the Forbes family. The estate is managed for its resources but is left open for public access. The small piece of woodland explored in the archaeological project is regularly used by almost all the children after school and at weekends. To many, it was already a well-known landscape and exploring it in more depth merely extended their own personal explorations. This is another interesting reversal. Many archaeological sites are already seen as ‘special’ or gain that significance as soon as something is found there. At Keig the change has been gradual: an already well-used area simply developing further layers of meaning within the past, present and future communal landscapes.

Over the last few weeks (at the time of writing) a wooden structure has appeared in the woods. This takes the form of a timber-laced framework with woven wattlework. It has footings of stones and the whole measures barely 2m x 1m. On questioning the pupils about it, it appears that a former pupil of the school (now in secondary education) is in the process of making it. He has used the knowledge gained from his own excavations of an 18th-century structure to try his hand at his own bit of experimental archaeology. This also has been made possible because of the open-handed nature of land management on the Forbes Estate.

Is it possible to say whether the research carried out within the school might leach out into the wider community and generate greater concern for the local cultural heritage? In terms of the landscape management of the area, the Forbes family has shown great interest in the project from the start. They, along with everybody involved with the project, have been startled to find out about the complicated history lying just below the surface of a small piece of woodland on their estate. Conversations with Lord Forbes have indicated that he is now more aware of the heritage for which he feels responsible. As noted above, as a landowner who has time and again shown himself to be very socially-responsive, it is hard to imagine that this will not impact on the way future landscape management decisions are made.

With respect to the wider local community, it is difficult to assess the long-term impact. Certainly, a much larger number of people within the community now know a lot more about their cultural landscape. And, for as long as the school project continues, it is hard to imagine that this continual drip of knowledge from the children will not permeate the wider social network. Were the project to finish, it is interesting to speculate how resilient any gains would be. Presumably the historic record would

remain in its updated form but it is unlikely that any experiential or methodological gains would survive. This is a situation facing all community engagements: if the social fabric of a community cannot be altered to accommodate a new way of 'doing' prior to the cessation of an enterprise, all experiential lessons are likely to be lost. Long-term, low-input, sustainable engagements, such as the Bennachie Landscapes project hopes to engender, may offer a better means of achieving such social change than short-term, high input, non-sustainable approaches.

The question of whether such research might engender greater social cohesion within a rural community is clearly harder to determine. The Bennachie Landscapes project hopes to achieve this through raising awareness and pride within local communities of their own unique sets of cultural heritage. It is hoped that when these are highlighted, through various projects, and shared between communities the differences and similarities within and between these communities can be compared, contrasted and celebrated. It has already been noted that communities work at a slow pace due to circumstances of availability of time and other factors. So, even though the project has been running for five years and many exciting results have been seen (many being of much more than local significance), it is still too early to evaluate such a question. Only a small number of projects across a massive transect of landscape have been accommodated. It is hoped that the development of low-cost, though time-consumptive, methodologies will help the sustainability of the project for long enough for genuine social change within some of the communities to occur. This has to remain, however, a vision for the future.

Conclusion

In the introduction to this book Graham and Vergunst refer to heritage as a mode of action, and of the practice of 'heritage as relationships created through enquiry,' (this volume: 2). In this chapter we have demonstrated how these ideas are embedded in the ways in which the Keig archaeological project unfolded. From a theoretical perspective Ingold's notion of dwelling and Bourdieu's idea of habitus is mirrored by approaches to outdoor learning taken by Mannion et al (2013) in relation to the intermingling of nature and culture which occurs through the actions embedded in place – responsive pedagogies and Beames and Ross' journey pedagogies (2010). Experiencing this through the combined educational and archaeological practices and those of everyday life, we demonstrate Tilley and Ingold's observations of the enmeshed way in which history and heritage is actively created through the gathering together of places, people memory and history (Tilley, 2004; Ingold, 2011).

Through Colin's involvement the project, the community came into the school, and through the children's investigations the school became enmeshed in wider community practices of heritage. In the beginning of the chapter we highlighted the role of social relations in creating meaningful and engaging contexts for learning. We can draw parallels with the way in which Jane has put into action the Scottish Government's

emphasis on the importance to children of understanding the places in which they live in relation to family, community and heritage (Scottish Executive, 2006). From an international perspective this echoes the New Zealand National Curriculum which highlights the importance of providing the conditions for children to grow up with a strong sense of belonging both socially and culturally (Carr, 2005). Community heritage projects such as this create rich and active contexts for developing children's core skills of literacy, numeracy, health and well-being that are imperative to closing the attainment gap.

This project clearly demonstrates the value of a lived curriculum to the children in Keig Primary School but also to a wider community of people interested in the history and heritage of North East Scotland. Through their involvement in the archaeological project the children learned about the history of their local community and, through getting to know Colin, came to know what archaeology is as a practice and its role in understanding both their community in the past, present and possibly its future. Perhaps, as Sonu and Snaza put it, this project 'requires the reverse of what has always been familiar in education: for the adult to return to a child-like openness with the materiality around us' (2015: 261).

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Captions

Figure 9.1: Keig Primary School pupils at work (photo: Elizabeth Curtis).

Figure 9.2: Adding materials to the Collector's Cabinet (photo: Elizabeth Curtis).