

The Hampshire Trailblazer
Award Scheme
An Evaluative Report

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1. Introduction

1.1 The Hampshire Trailblazer Award Scheme

The Hampshire Trailblazer Award Scheme (usually referred to as ‘Trailblazer’ from this point) promotes outdoor learning through the accreditation of off-site and residential activities, outdoor and adventure activities, fieldwork and the use of the outdoor classroom and education for sustainable development. It focuses on the development in children of key skills both cognitively and socially. The scheme is managed jointly by two departments of Hampshire County Council, ‘Children’s Services’ and ‘Recreation and Heritage’.

The Hampshire Trailblazer scheme was devised by Dr Stuart Nundy, Outdoor Activities Officer, Hampshire County Council and Steve Poynton, County Inspector: Outdoor Education in 2001. It was based on a similar project set up by Nottinghamshire Local Education Authority. The Nottinghamshire scheme was subsequently adapted to match the needs of Hampshire, Portsmouth and Southampton.

During the development of the scheme, three programmatic themes emerged as being the most salient. These themes are outlined in the Trailblazer Coordinators’ Folder:

- *Learning to learn*—through focusing on successful outdoor activities and learning strategies;
- *Learning about yourself*—through focusing on personal and social development and key skills; and,
- *Aiming higher*—achieving a ‘personal best’ through increasing confidence and success.

The themes helped to define the mission of the programme and additionally led to the creation of activity strands around which curriculum could be organized.

1.2 The activity strands

The three activity strands are: *Discovering the Environment*, *Exploring the Environment* and *Caring for the Environment*. From these strands a curriculum was devised which attempts to engage children in discovering, exploring, and caring for the environment. The curriculum is not fixed: as long as children are engaged in learning which falls under one of the strand areas, they can receive Trailblazer credit for their work.

The credits are based on the number of hours in which students engage in the activities. This time can include classroom work as well as activities undertaken outside. The award hours are colour coded and earned progressively: Green: 40 hours; Bronze: 60 hours; Silver 80 hours, and, Gold: 100 hours. The coordinator manual emphasizes that only work undertaken while working in a strand area will be counted as hours towards completion.

The Trailblazer Management Team decided that the optimum way to assess the acceptability of the Trailblazer work hours was through an auditing system in which teachers demonstrate involvement in Trailblazer activities with a log of award time and during a validation visit, through displays, discussions with children and staff, and evidence such as a marked portfolios of students' work for accreditation.

1.3 Implementing the Hampshire Trailblazer Award Scheme

A school becomes involved in the scheme by sending a teacher to a training course. The teacher then returns to their school to implement the scheme. Each individual or team of teachers can implement the scheme as they see fit. A single class may adopt the scheme or the whole school may take it up. In some cases, the scheme is operated through an after-school club. The scheme is supported through a newsletter, *Out There* and regular communications from the Trailblazer office. The Trailblazer project manager also visits schools to support setting up the scheme and to introduce it to staff and students where required.

Four schools volunteered to pilot the scheme. . Since the pilot, the scheme has grown organically and by the end of the first full year, students from 24 schools were taking part. Teachers and headteachers generally hear about Trailblazer through word of mouth: advertising for the scheme is minimal. By 2005, the number had risen to 150 schools.

1.4 Evaluating the Scheme

In 2004, to augment the internal monitoring and evaluation of the scheme carried out by Hampshire staff, an external evaluation was commissioned. The Centre for Informal Learning and Schools, based at King's College London, was invited to evaluate the scheme through visits to schools and centres in Hampshire. The evaluation was carried out by Patrick Dowd and Justin Dillon during the 2004/5 school year. This report described the way in which the evaluation was carried out and summarizes its findings.

2. Executive Summary

This evaluation of the Trailblazer scheme highlights the benefits of promoting outdoor learning in state schools. It is important to note that the need for environmental education is increasing just as children and adults seem more and more alienated from the natural world. Children also benefit from classroom-based environmental education experiences. This area of education can encompass many different topics presented using a variety of pedagogical techniques. A Trailblazer lesson might encompass subjects such as biology, geology or physics with students being given an opportunity to reinforce what they learn in the classroom.

The main findings of this report are as follows:

- Trailblazer teachers utilize a wide variety of teaching strategies which seem to connect with students' different learning strengths.
- Trailblazer students develop understandings and teamwork skills as well as learning to enjoy learning through their Trailblazer experiences.

- Trailblazer encourages students to be intrinsically motivated.
- Trailblazer helps students move forward in their learning both within and between key stages 1, 2 and 3.
- The flexibility of the Trailblazer curriculum to be shaped to students' needs allowed the scheme to be successful at participating schools.
- Teachers expressed a high level of satisfaction with the Trailblazer curriculum.
- Trailblazer teachers assessed students' success based on their experience of the curriculum rather than through traditional testing and marking.
- Trailblazer is exceptional as an awards scheme in that it can be adapted to fit into almost any school, youth group or outdoor centre within the Hampshire, Portsmouth and Southampton LEAs.

The greatest benefit of the Trailblazer scheme is that it provides an opportunity to learn how to learn in the outdoors. One trip to a field centre or a botanical garden is a small fraction of a student's learning experience but if they are shown how to engage with the natural world on their own, then each time they venture outside, the world becomes a more intellectually stimulating environment.

3. Background

Outdoor learning supports academic achievement, for example through fieldwork projects, as well as the development of 'soft' skills and social skills, particularly in hard to reach children. It can take place on school trips, on visits in the local community or in the school grounds ... Provision by schools is extremely patchy. Although some schools offer an active and well-planned programme of outdoor education, which contributes significantly to teaching and learning, many are deterred by the false perception that a high degree of risk attaches to outdoor education as well as by cumbersome bureaucracy and issues of funding, time and resources. (House of Commons Select Committee on Education and Skills, 2005, p. 3)

This report is published at a significant time in the development of education in schools. Although the majority of teachers and parents might well agree that out-of-school activities are important, there is increasing awareness of the real and imagined risks and costs of such activities. So do benefits outweigh risks? Is there any compelling evidence that, compared with classroom learning, out-of-school learning is different, better, or, as some argue, potentially life changing?

The Select Committee report referred to above noted that *'like all educational processes, the benefits of education outside the classroom should be rigorously researched, documented and communicated'* (Select Committee, 2005, pp. 8-9). The government's *Growing Schools* programme seeks to enable *'schools to make better use of the outdoor classroom as a context for teaching and learning'* (DfES, 2004). Two relatively recent research publications – an NFER/King's review of research on food and farming education (Dillon *et al.*, 2003), and a CEE/Bath University evaluation of the Growing Schools Innovation Fund Projects (Scott *et al.*, 2004) – have highlighted the need for stronger empirical and conceptual understandings of learning in the outdoor classroom.

Finally, we agree with the findings of the Education Select Committee that:

... education outside the classroom is of significant benefit to students. Academic fieldwork clearly enhances the teaching of science and geography, but other subjects such as history, art and design and citizenship can also be brought to life by high quality educational visits. Group activities, which may include adventurous expeditions, can develop social skills and give self-confidence. Furthermore, outdoor education has a key role to play in the social inclusion agenda, offering children who may not otherwise have the opportunity the simple chance to experience the countryside, or other parts of our heritage that many others take for granted. (Select Committee, 2005, p. 7)

4. Methods

4.1 Goals

Rarely are the outcomes of outdoor learning programmes assessed systematically. The benefits of outdoor education are often assumed rather than proven. This study was undertaken to evaluate the effectiveness of the Trailblazer scheme in Hampshire county schools. Specifically, we were asked to identify what sort of learning takes place. We grouped the learning that we observed into three categories: cognitive, interpersonal and affective.

This research focused on the Trailblazer programme in three schools covering two key stages of the National Curriculum. In that context, the research aimed to identify:

1. A range of effective teaching across key stages 1-3;
2. The range of learning outcomes resulting from effective teaching;
3. Progression in learning outcomes within and between the key stages;
4. The benefits to teachers of participating in the Trailblazers programme;
5. Assessment and evaluation strategies used by teachers;
6. Factors that encourage or impede teaching and learning.

4.2 Research

The research commenced on November 1st, 2004 and ended on August 31st, 2005. Four visits were made to each of the three participating schools during the 2004/5 school year for a total of 12 site visits. The visits lasted from one to six hours—averaging just under three hours of observation per visit.

The research involved the observation of teaching and learning in schools and other educational sites such as the Sparsholt Schools' Centre for Environmental Education in Winchester. During these visits, interviews were conducted with teachers and pupils that focused on student learning, character development and

enjoyment (see Appendix 2 for a schedule of visits). Sections of the curriculum were analyzed for their alignment with programmatic goals as was student work and other relevant written materials.

Participating Schools and Classroom

The three participating institutions were Longparish Primary School, Cranbourne Technical College and Micheldever Primary School. More information about each institution can be found in Appendix 1. The amount of time spent observing each school varied depending on the curriculum and site constraints. The majority of the data collected was from two years: Year 4 (primary) and Year 7 (secondary). The pupils in the Micheldever study mainly consisted of Year 4 students. Although the Longparish School incorporated Trailblazer throughout the curriculum, a third of the research time was spent observing a Year 4 field trip to Sparsholt Agricultural College. The observations of the Year 7 students from Cranbourne Technical College contrasted with the primary school data and provided insight into how the Trailblazer scheme could be incorporated across the educational spectrum.

5. Findings

5.1 Introduction

The findings of the research are organised into five sections based on the research aims. Within each section the data are summarized and some specific examples are given to highlight pertinent issues.

5.2 Effective Teaching across Key Stages 1-3

A variety of effective teaching strategies became apparent during the course of this study which complemented students' level of learning and from which they appeared to benefit. These included: *student-centred teaching*; *hands-on teaching*; *teaching locally*; *teaching by experts*; *ability-tailored teaching*; and *curriculum-aligned teaching* (see Table 1 for descriptions of each strategy).

Example: Longparish Primary School

Many of the strategies were observed to occur simultaneously. All six strategies were employed at once when Longparish Primary School visited Sparsholt Schools' Centre for Environmental Education to participate in the *Rocks and Soils*, 'Are they alive?' curriculum.

First, the centre educators followed the students' interests by allowing them choice in how they observed and collected soil samples from different locations around the Centre (student-centred). Second, students were encouraged to touch, smell and observe the soil they were investigating (hands-on). Third, as the soils were common to the region and could be found in their own locality, this lesson qualified as being about their local area (teaching locally). Fourth, the centre educators were experts in environmental education; many with more than 15 years' experience in the field, providing teachers and students with a broader base of skills and knowledge (teaching by experts). Fifth, centre educators, visiting teachers and participating parents continually adjusted the lessons to fit with multi-age and ability level students (ability-tailored teaching). Sixth, teachers made sure to align the Trailblazer experience with school and National Curriculum (curriculum-aligned teaching). For example a curriculum booklet from the Sparsholt Schools' Centre stated, 'The course [*Rocks and Soils*] is designed to complement and extend school based learning by providing practical experience for KS2 pupils in the following National Curriculum 2000 Programmes of study' (Sparsholt Schools' Centre for Environmental Education, 2000).

Longparish teachers demonstrated a high level of involvement and used a wide range of effective teaching strategies. The headteacher described some of the teaching strategies used:

We have had support from Hampshire Wildlife Trust and we are able, through our parent support of the school, to bring in expertise and work with the children, like a [naturalist] with his *High Tech Wild Trek*. They

love it. And that is because they can see, actually see, what they have caught, as it were, and see it moving, and it is just remarkable to them. And we are able to bring in speakers. One came and talked about bats one summer evening and then we were able to go into the meadow next door and see them flying.

Children participating in Trailblazer at this school learn hands-on by catching (and releasing) creatures out in the woods or stream and through watching bats fly around their grounds in the early evening. The result is that children are also learning locally, discovering phenomena pertinent to their daily lives. The headteacher believes that this is one of the best aspects of the Trailblazer curriculum because it supports the children's learning outside of school and creates opportunities for them to follow up on their interests. Finally, by bringing in outsiders to discuss the issues of interest, whether it is bats or water spiders, the children have the opportunity to learn from experts allowing them to receive more in-depth answers to their questions.

A strength of the Trailblazer scheme is that it encourages educators to use a curriculum that allows them to employ a broad spectrum of effective teaching strategies (see Table 1). The array of teaching that students experienced through Trailblazer seemed to support their different learning styles. These multi-layered teaching strategies appeared to be utilized at all three institutions. For instance, at Micheldever Primary School, children were eager to do their garden-related Trailblazer work. As the participating teacher noted, it became a very student-centred aspect of the curriculum:

And each week they say to me—what can we do in there [the garden] for you? And so I get them sweeping up leaves and just keeping that tidy and pleasant. And it is coming from them quite often, you know, they want to do it.

The teacher's willingness to let the students take charge of the garden, to make it a more student-centred part of the programme, allowed their natural interests and enthusiasm to flourish.

Effective Teaching Strategies	Examples
<i>Student-Centred Teaching:</i> Teaching that takes into account students' subjective and objective needs.	LP: Student-directed soil investigation CB: Student-directed nature poem projects MD: Student-led orienteering activity
<i>Hands-On Teaching:</i> Teaching that provides the opportunity for students to directly engage with the material being studied.	LP: Encouraging touching, smelling and observing different soils. CB: Students adopt a school tree lesson (Tree Sampling/I.D.) MD: School Gardening
<i>Teaching Locally:</i> Teaching that encourages students to develop a sense of place for the region in which they live.	LP: Collecting samples of local water flora from stream adjoining school CB: Learning local tree names from around the school and community MD: Investigating neighbourhood birds and connecting ecology
<i>Teaching by Experts:</i> Outside experts in the particular subject matter being studied become directly involved in student learning.	LP: A naturalist from <i>High Tech Wild Trek</i> coordinated an investigation of river life CB: Sparsholt Agricultural College visit MD: Sparsholt Agricultural College visit
<i>Ability-Tailored Teaching:</i> Students' learning differences are acknowledged and teachers adjust curriculum in accordance with these	LP: A year R-6 Progressive Trailblazer curriculum designed around the whole school CB: Trailblazer Curriculum

disparities.	adapted to fit special needs of children in <i>Learning to Learn</i> Programme MD: Multi-age after school club learning supported by teaching aides and peer teaching.
<i>Curriculum Aligned Teaching</i> - Teachers tailor their curriculum making it suitable both for their personal and administrative goals.	LP: Teachers fitting multi-year curriculum into Trailblazer assignments. CB: Teachers reported adapting Trailblazer curriculum to fit special needs students' curriculum MD: Curriculum aligned to supplement school curriculum.

Table 1. Examples of Effective Teaching Strategies at Longparish (LP), Cranbourne (CB), and Micheldever (MD) Schools

Another aspect of effective teaching strategies employed by both Longparish and Micheldever teachers was to align the curriculum with learning opportunities. Trailblazer was consciously adapted to the school's curriculum. For instance, the headteacher of Longparish School took the three main Trailblazer activity strands (Discovering, Exploring and Caring for the Environment) and created customized strands that she felt aided her students in understanding the purpose of the programme more readily (see Table 2)

Trailblazer Curriculum	Longparish Adapted Curriculum
Discovering the Environment	Open Doors
Exploring the Environment	Open Eyes
Caring for the Environment	Open Minds

Table 2. Longparish Adaptation of Trailblazer Curriculum

5.3 The Range of Learning Outcomes Resulting from Effective Teaching

The range of learning outcomes can be broken down into three categories *Cognitive, Interpersonal* and *Affective*. Whether students' learning was exemplified by new understandings about natural phenomena, whether they figured out how to work together more easily or whether they developed a positive attitude towards the subject area, Trailblazer experiences appeared full of a rich variety of learning outcomes (see Table 3).

Learning Outcome	Average Segment Time Observed	Average Number of Instances Observed per Segment	Observation Examples
Cognitive	9 minutes	4	LP: Learning soil parts MD: Building bird feeders CB: Investigating the seasons effects on trees
Interpersonal	9 minutes	2	LP: Small group soil collection MD: Working together to dislodge garden rocks CB: Group orienteering scavenger hunt challenge
Affective	9 minutes	2	LP: Excited voices concerning exploration of an excavation pit MD: Smiling/laughing and joking during gardening CB: 'We got to have fun' (student)

*Note: the number of students observed varied.

Table 3. Learning Outcomes as Observed at Longparish (LP), Cranbourne (CB), and Micheldever (MD) Schools *

Table 3 shows that during an average nine minutes of Trailblazer teaching time there were at least four cognitive, two interpersonal and two affective episodes when data from the three schools is considered together. Many interactions were probably missed and these numbers are probably conservative in nature. Further, interview data collected from Trailblazer teachers appears to back up these findings. For instance, participating teachers regularly referred to students' high level of enjoyment during Trailblazer activities. Common statements included, 'there is certainly a fun element' and 'I have heard so many children saying I didn't know it could be so much fun caring for the environment.'

Teachers also commonly referred to the interpersonal nature of the Trailblazer activities. One participating educator said:

They really enjoy cooperative tasks. We did the one on the skipping rope where they have to order themselves according to age or according to height, and they can't let their feet touch the rope.

The research shows that these three categories do not stand alone, instead students benefit in all three learning outcome areas simultaneously. For example, there were combined cognitive and interpersonal outcomes owing to the large number of instances in which children were provided with opportunities to work in small groups during Trailblazer activities (observed during multiple visits from 4/2/05 onwards).

Small group interaction or collaborative work has been shown in other research findings to be a powerful tool for inciting conceptual change among students. This is especially true in the sciences (Metz, 1998). Further, outdoor education programmes are shown to have positive impacts on typically measured interpersonal and affective outcomes (for example in team-work skills and self-confidence) (Hattie, 1995). All of these findings suggest that the interwoven

learning outcomes which the Trailblazer awards scheme encourages result in a well-rounded/holistic curriculum.

Example: Micheldever Primary School

At Micheldever Primary School during one 50-minute Trailblazer session a researcher documented six high quality interactions (that is, students used a wide variety of problem solving skills to make decisions of an interpersonal nature) as students worked together on the playground garden. In this learning episode Cindy and John (pseudonyms) compared dandelions in bloom with those in seed. The children tried to figure out which came first, drawing on the old adage (which came first the chicken or the egg) in the process.

Cindy: Which way around does it go? Does this [dandelion with petals] turn into that one [dandelion gone to seed] or that one into this one?

John: It's just like the egg and the chicken, that's [pointing to the dandelion gone to seed] the seed for that one [pointing to the dandelion with petals].

John: It's like the water cycle, it never stops.

Cindy: Yes, but how did it start. Is it like evolution? Is that what is happening?

The students' questions emerged naturally from the Trailblazer fieldwork. The informal setting of the programme gave students time to inquire about the life-cycle of the plant immediately in front of them. Further, they worked together in an openly conversant way to further their understanding of the 'which came first' conundrum. In the process they struggled with new terms and came up with new questions, such as whether there was a link to 'evolution'.

From the interaction it seemed that Cindy and John did not yet resolve their questions. However, they did debate its connection to the plant's life-cycle, and in so doing, arguably created mental models from which they could later draw upon

in making meaning out of the world and further develop their cognitive abilities. Trailblazer experiences seem to create opportunities for students to engage in these impromptu learning moments that may later lead to a better understanding of academic concepts presented in more formal settings. Further, the students benefited interpersonally by working together through the learning process.

5.4 Progression in learning outcomes within and between the key stages

There is some evidence that progression of learning outcomes within and between the key stages happened. Within the key stages, learning was documented using portfolios at the schools observed. Portfolios were used as a way to show evidence for the hours earned towards a Trailblazer Award.

The booklets, filled with Trailblazer Student work, appeared to show a steady maturing of their understanding about the activity strands—discovering, exploring and caring for the environment. For example, one Year 4 student demonstrated a robust enthusiasm for the Trailblazer programme which earned him a Gold Trailblazer Award. In his portfolio he noted discovering the environment through an investigation of owl pellets. He described an exploration of the farm environment at the Sparsholt Schools' Centre for Environmental Education while comparing the soil on different parts of the farm. Finally, he wrote about doing local community service to care for the environment. It appeared that the work documented in this student's portfolio at year's end represented a broadening and progression in his understanding and empathy for the natural world.

In terms of learning between the key stages, there was evidence to suggest that Trailblazer could have a positive impact. Trailblazer was implemented differently in the key stage 3 Cranbourne School compared with the two primary schools (Longparish and Micheldever). At Longparish and Micheldever Schools, Trailblazer was linked to the schools' general curriculum requirements either directly, as at Longparish or indirectly through the Trailblazer club programme at Micheldever. While at Cranbourne, the Trailblazer scheme was implemented as an additional curriculum to a special education class called *Learning to Learn*.

The two Year 7 groups involved worked on basic skills such as listening, thinking, reading and writing instead of going to foreign language classes. As documented previously (section 5.3), students reported a high level of satisfaction with the Trailblazer Scheme and displayed many signs of positive affective behaviour during their classes.

The difference in the Cranbourne students' case was that they were a select population brought into an alternate-learning environment when they were exposed to Trailblazer. The participating teacher at the Cranbourne School described how the Trailblazer Scheme helped her students come to enjoy schooling more and progress in their learning:

[Trailblazer is] very practical, simple so the kids enjoy it, and that they can get something out of it, but learn, sometimes, without realising they are learning. And then getting the feedback from them so you can see how they have worked with each other and the teacher or with any helpers that were with them. Just the enjoyment, I think. And then, through that enjoyment they get their learning.

Students in the *Learning to Learn* programme progressed according to this teacher, first through enjoyment of the work which then led to gaining new understandings.

5.5 The benefit to teachers of participating in the Trailblazer programme

Participating teachers and outdoor educators identified a range of benefits which they attributed to their involvement with the Trailblazer Scheme. Many liked the multidisciplinary approach of the programme. One teacher commented, 'So if they go out finding examples of leaves or something, and they can suggest ways they can present it from other data handling experiences in maths'.

Another teacher commented how she liked it when the Trailblazer exercises could be linked to English, ‘They do a poetry orienteer [exercise] which is good, because it incorporates the English side of it!’ Further, teachers expressed their surprise at the high quality of the students’ work once they were given some freedom and flexibility to learn effectively. As one teacher put it, the kids ‘just go away and do research on their own. It amazes me. It is fantastic’. Their interest might not be so surprising when one considers these teachers own affinity for the outdoors. One reason all the participating teachers described for participating in Trailblazer was their positive past experiences with learning in nature. One teacher commented;

I was quite interested in it, because I like the outdoors and doing the activities ... I had those experiences when I was younger, I went on camps and did all the activities available, and you get to meet new people, you get to have new experiences, you challenge yourself, you challenge each other, the possibilities are endless.

5.6 Assessment and evaluation strategies used by teachers

In interviews, teachers said they followed the Trailblazer guidelines for assessment. This included both auditing schoolwork for hours that were applicable to the Trailblazer Scheme and implementing a curriculum that supported and furthered students’ in-class work. At the Micheldever School, one participating teacher thought out loud about how she planned to award hours:

I liaise with the teachers and ask them what they are doing that involves the outdoor environment. Sometimes it is a maths activity; quite often it is science or geography. So I look at what they are going to cover over the year in that class. And I don’t want to repeat that activity, but I want to make sure it is included in their reward. So I took that first and thought – well, they are doing this, this and this in that class, these are the things the children would like to do, and I would like to do this. And it is just all slotted into a timetable like this.

This teacher made sure to accredit hours the students had already completed in class before concerning herself with work done during organized Trailblazer time. In terms of assessment it appears that participating teachers considered classroom work to be previously assessed and thus eligible to be included into the students' Trailblazer award hours.

Much of the assessment for Trailblazer work revolved around the *Trailblazer Award Time Record Sheet*. On the record sheet, students documented their relevant hours and activities that were then signed off by supervising teachers. The teachers at all three schools repeatedly reminded their students when the work they did was eligible for Trailblazer Hours. It seemed these statements were used to encourage students. Yet, participating teachers did not appear to motivate students through the threat of assessment. In other words, teachers were not observed marking Trailblazer work nor saying they had done so during interviews. In short, Trailblazer educators seemed most interested in students experiencing the curriculum for its own sake (and gaining the requisite award hours) rather than on testing their work for mastery of content knowledge in a traditional sense. Further, students became their own assessment monitors in terms of the hours earned. As a Trailblazer teacher noted:

... the kids came into me on Tuesday and said— 'Hey Miss, we went to the churchyard yesterday [to investigate plant life], does that count as Trailblazers?' And I said—'Yes, that's great!'

5.7 Factors that encourage or impede teaching and learning

The Trailblazer Award Scheme is a tool offered to schools and clubs that wish to accredit and improve their outdoor learning programming. It is exceptional in that it can be adapted to fit into a variety of academic settings and still be flexible enough to suit the needs of students at different levels of development.

Trailblazer's adaptability also means that the factors that encourage or impede teaching and learning result mainly from how participating teachers implement it.

For example, at the Longparish School, the Trailblazer scheme was adapted to fit into a multi-year curriculum (Reception to Year 6) and children seemed to benefit from revisiting the programme each year.

At Cranbourne Business and Enterprise College, Trailblazers was incorporated into the special education course, *Learning to Learn*. In doing so, children coming to grips with their own learning challenges were introduced to an environmental curriculum that they found enjoyable. For example, some students did not consider their Trailblazer time to be schoolwork.

Grace: Yeah, we have to do [real] work upstairs. [But] We want to do Trailblazers

[and later that same class session while observing them write nature poems]

Researcher: So are you working right now?

Steph: No, we are playing

Trailblazer appears to encourage students to be intrinsically motivated and seems to create situations that develop positive attitudes towards learning. These positive attitudes are exemplified by deep student investment in the programme activities. For example, it appeared during field observations that students wanted to continue with their work well after the class, or club time had come to an end.

One researcher has coined these enjoyable and long held learning states as ‘flow’ (Csikszentmihalyi and Hermanson, 1995). On the one hand, it is during these enjoyable learning or ‘flow’ times, with students invested in their lessons that Trailblazer succeeds best in encouraging learning. On the other hand, it appeared that when Trailblazer teachers begin educating in a more traditional way, such as lecturing and using didactic techniques, that the students shifted into more passive learning roles. Therefore, it seems essential to encourage participating educators

to be aware of when they make these shifts into didactic pedagogical practices so that they might return to the more effective strategies outlined in Table 1.

6. Discussion

The benefits to students of participating in outdoor learning programmes such as the Hampshire Trailblazer Awards Scheme and their educational outcomes are well documented in the literature (Rickinson, 2001; Rickinson *et al.* 2004). In addition to supporting students' conceptual growth in the natural sciences, this programme fosters interpersonal skills and instils a love for learning and adventure. Further, Trailblazer is prime for continued growth and development. It seems that its adaptability makes it accessible to any school or club in the Hampshire, Portsmouth or Southampton LEAs, and possibly beyond, that is willing to implement it.

The Trailblazer Awards Scheme could continue to improve by increasing the amount of training that Trailblazer teachers receive working in non-traditional outdoor settings. It seemed throughout the research process that it was often left to the 'experts' at field centres to teach and explore experientially outside the classroom. With the exception of school gardens, we were aware that more hands-on teaching could be offered outside the classroom and in the school grounds. We attribute this to some teachers' unease working within naturalistic settings. Trailblazer staff could help participating educators in their network to become more comfortable doing hands-on activities by extending their training and giving more onsite tips for implementing the curriculum throughout the school year.

The Hampshire Trailblazer Awards Scheme appears to be an exciting educational programme. It inspires students, teachers and parents to become enthusiastic about their natural surroundings and to see them with fresh eyes. There is perhaps no greater benefit we could be providing communities today than to reconnect them with their local environment. We envisage that Trailblazer could create a

much-needed ripple of compassion for open spaces that will ensure their appreciation and preservation for many years to come.

7. References

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8. Appendices

Appendix 1: Participating Schools and Classes*

School/ Trailblazer Coordinator	Type	Student Population	Number of Trailblazer Participants/ Year
Longparish C E/ <i>Rosalind Hobrough</i>	Rural Primary	88	88/ <i>Rec-6</i>
Cranbourne Business College/ <i>Jane Royer</i>	Suburban Secondary	1161	20/ 7
Micheldever C E/ <i>Karen Maclean</i>	Rural Primary	82	15/ 4

*Numbers are based on data last updated 04/05 at <http://www.hants.gov.uk/education/schools/schools.php>

Appendix 2: Schedule of Visits

School	Date/Duration	Location	Method	Topic/Activity
Micheldever	19-11-04/ 90 min	Micheldever	Audio Interviews	Participating Teacher Interview
	11-02-05/ 360 min	Sparsholt Agricultural College	Audio Interviews, Video Observations	Orienteering Day
	03-03-05/ 60 min	Micheldever	Audio Interviews, Video Observations	Birding Research, Gardening
	03-05-05/ 60 min	Micheldever	Audio Interviews, Video Observations	Garden Maintenance
Cranbourne	19-11-04/ 50 min	Cranbourne	Audio Interview	Participating Teacher Interview
	08-02-05/ 60 min	Cranbourne	Audio Interview, Field Notes	Lollypop orienteering
	08-03-05/ 60 min	Cranbourne	Audio Interview, Field Notes	Adopt a Tree
	17-05-05/ 60 min	Cranbourne	Audio Interview, Field Notes	Nature Poems
Longparish	17-10-04/ 90 min	Longparish	Audio Interview	Interview with Head of School
	04-02-05/ 240 min	Longparish	Audio Interviews, Video Observations	Birds in Winter
	04-03-05/ 360 min	Sparsholt Agricultural College	Audio Interviews, Video Observations	Rocks and Soils
	23-06-05/ 120 min	Longparish	Audio Interviews, Video Observations	School Grounds Day, Trailblazer Presentations/ Awards
Training Day for Participating Educators	11-03-05/ 300 min	Sparsholt Agricultural College	Audio Interviews	Nature Cards, Name Games, Trailblazer Overview/Slides how

Appendix 3: Interview Schedules

Questions for school managers

1. What criteria did you use to choose these four schools?
 - a. Is it a good school because it documents its progress well, gives out lots of awards, etc.
 - b. Or teachers participate year after year?
2. From what you've seen so far what substantiates good practice?
3. How has the programme grown over the years?
4. What kind of suggestions for improved practice would you be interested in?
5. To what extent would you like the research to focus on teacher, in addition to student, outcomes?
6. What permissions do I need to take video data?
7. Can I interview children who participated in the programme last year?
8. I would like to see both on-site and off-site activities

Questions for children:

Pre-activity Questions

1. What trips did you do last year in school?
2. What did you find interesting about them?
3. Do you do those sorts of things with your family?
4. What might you find difficult/easy about this activity?

Post-activity Questions:

5. What do you like (not like) about this _____[activity]?
6. What might you say to your parents about what you did?
7. What have you learned?
8. Is that a good thing?
9. What does Trailblazer mean?

Questions for teachers:

1. What makes for a good Trailblazer exercise?
2. Why did you choose to be a part of the trailblazer awards scheme?
3. What kind of support do you get from the school/community (money, resources etc.)?
4. How do you plan for Trailblazer activities? (pre and post activities?)
5. What have been the children's experiences so far?
 - a. What sort of evidence (drawings, journal entries) do you have from previous activities?
6. Are there specific children you recommend that I focus on in my research?
7. Can I do a one on one chaperoned interview with a student? Or a group Interview? (Idea of pictures and sticky notes, smiley face =fun, exclamation=learning—styles of formative assessment).

Appendix 4: Video data coding sheet

Time/Code Evidence:

1. There seems to be evidence of students being engaged cognitively: (For example, are they: applying knowledge skills in realistic contexts? Recognizing the affect of present actions on the future? Reviewing the information?, Are they asked what they thought?, Are they exploring new attitudes and Values?)
2. There seems to be evidence of students being engaged interpersonally: (For example, are they: showing initiative and demonstrating cooperative behaviours? Is feedback happening through positive reinforcement? Are they defending their point of view, such as expressing why they did something? Do they have the ability to cope with adversity?)
3. There seems to be evidence of children being engaged affectively: (For example are they: smiling? Showing appreciation for natural world? Exhibiting positive attitudes? Physically running around and demonstrating enjoyment through play?)