

## OUTDOOR STUDY OF NATURE: TEACHERS' MOTIVATIONS AND CONTEXTS

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### ABSTRACT

Across the UK outdoor study is high on current educational agendas. This paper discusses the analysis of in-depth interviews (n=20 interviewees) and a short questionnaire (n=98 returns) addressing Scottish primary and secondary teachers' attitudes to organising outdoor study of the natural heritage for their pupils. It concerns both the decision-making factors that teachers consider and their institutional contexts. We argue that a possible approach to understanding teacher decision-making, and to informing policy, is to frame teacher decision-making as a balance between the effort/cost of organising outdoor study and a wide range of 'unofficial' benefits. This contrasts with one that would only frame teacher decision-making as a balance between child-safety and official curriculum-relevance. While safety dominates public/media discourse it appears less dominant in teacher discourse here. And while teachers all deploy the official curriculum in their justification for outdoor study, the curriculum in fact offers little explanatory power (for various reasons) in teacher motivation. Teacher understandings of less 'legitimate' benefits of outdoor study are more helpful. This framing suggests that focusing on resources and legitimising the wider benefits are appropriate policy responses to a widespread desire for more outdoor study. However, we also suggest that legitimising such benefits presents researchers, policy-makers and teachers with a significant challenge in terms of developing a pedagogical evidence-base.

### INTRODUCTION

This paper reports on a mixed methodology study of Scottish primary and secondary school teachers' attitudes to taking pupils outdoors to study nature. The data discussed here refer to structured learning experiences, beyond the school grounds, learning both in and about nature. In this context we asked teachers what they did, what they would like to do, and what motivated or hindered them in doing it. These are not well-researched questions. Neither are the learner-outcomes of such learning experiences well-researched, a point which becomes important when we consider processes of legitimising teacher motivations that lie beyond the fulfilment of the official curriculum.

Scottish Natural Heritage (a public body under statutory obligation to the Scottish Executive to protect Scotland's natural heritage) commissioned the project. We used a stratified sample (urban/rural, primary/secondary, geography/biology) with a short questionnaire (n=98 returns, a 46% return rate) and in-depth semi-structured interviews (n=20 interviewees). Teachers raised many contextual issues concerning the organisation of outdoor study. Although safety and fear of litigation appears strongly in media discourse, the teacher discourse was subtler. Relation to the official curriculum (hereafter, Curriculum) is the strongest justification for outdoor study offered by teachers in decision-making. But, while this may be necessary, our analysis suggests that it is not sufficient to explain teacher motivation. Teacher understandings of other benefits of outdoor study are involved. These are important if we are to understand the current extent of the outdoor study of nature in Scotland, and anticipate its future through the on-going Curriculum Review (Scottish Executive, 2004a). But these teacher understandings raise a difficult challenge for researchers, policy-makers and teachers who might hope to see them become more legitimised in the new Curriculum, because a more convincing evidence base for their merits

may be needed.

#### BACKGROUND

There is empirical research and recent review work concerning the outdoor study of nature and its possible benefits (Amos & Reiss, 2006; Dillon *et al*, 2006; O'Donnell *et al*, 2006; Rickinson *et al*, 2004). In their important and timely review, Rickinson *et al* (2004: 56) note that much of the literature is not UK based, despite the importance of understanding such issues in local political and historical contexts (Ibid:57), and that there are 'blank spots', including concerning teachers' understandings (Ibid:56). We hope to go some way to addressing this by looking at teachers' attitudes and motivations in relation to the particular Curricular and policy context of Scotland.

As elsewhere in the UK, Scotland's historical picture is of declining opportunities for outdoor learning of the kind discussed here (beyond the school grounds and in natural settings) and of more recent concern about this<sup>1</sup>. Many of those who administer and organise educational opportunities for school pupils are unfamiliar with, untrained, and not required to deploy the learning potential of outdoor experiences in general. There is no statutory requirement for outdoor education. Whilst the 1944 Education Act and the 1945 Education (Scotland) Act did note the educational value of the outdoors (Cook, 1999), its provisions encourage rather than oblige Local Education Authorities. Furthermore, a 1945 Act of Parliament cannot be expected to have significant contemporary influence, especially in the face of the curricular expansion and budgetary constraints since the 1980s. And as similar processes have, and continue to be, applied to Higher Education, there have been reduced opportunities for trainee teachers to engage with the natural heritage through fieldwork and outdoor activities<sup>2</sup>. Higgins (2002) showed that Scottish Local Authority provision of, and financial support for, outdoor learning experiences have declined. Where it still exists in Scotland, school-organised provision is theoretically part of the educational endeavours of the school or Local Education Authority and schools work hard to provide outdoor activity free at the point of delivery. But many Local Authorities now seek to defray outdoor education costs by offering opportunities at residential outdoor centres, rather than providing school-organised activities, and young people (or their parents or guardians) must often pay for travel and food, and more recently for accommodation and staffing (Higgins, 2002). Whilst some close links remain, these policy shifts have in some cases led to a disassociation between outdoor/field centres and their Local Authorities, or to completely separate status and funding arrangements. A high proportion of the latter centres have sought and successfully gained charitable trust status and are essentially educational businesses. In addition, responsibility for the management of budgets and much spending has been devolved from Education Authorities to heads of schools (e.g. Scottish Office Education Department, 1993). This has allowed schools, on an individual basis, to decide whether or not, and when, they want to use centres, as well as whether or not they want to subsidise residential visits for their pupils.

Rickinson *et al* (2004: 12) reported that fieldwork and outdoor experience in the UK more widely is also restricted and declining, particularly in science. Although they extract a range of possible reasons for this from the literature, the tenor or relative importance of these might be summarised as:

Despite such wholehearted support, the increased perception of the risks together with a crowded curriculum and a rigid assessment system have led to a situation where the benefits of fieldwork and other kinds of outdoor learning do not appear to be fully appreciated (Rickinson *et al*, 2004: 9).

The House of Commons Education and Skills Committee (2005) concluded that

outdoor learning is valuable, that significant integrated outdoor learning experiences are the exception rather than the norm, 'that outdoor education is a sector suffering from considerable unexploited potential' (Ibid: 10) and recommended that the National Association of Schoolmasters and Union of Woman Teachers (NASUWT) reviewed its advice (Ibid: 12-13) to its members against taking school trips (following a series of well publicised school trip tragedies).

There have been recent pro-outdoor learning developments in both England (Department for Education and Skills, 2005) and Scotland. The Scottish Executive published guidance on *Health and Safety on Educational Excursions* (Scottish Executive, 2004b) and there has been a development programme (*Taking Learning Outdoors*) run by Learning and Teaching Scotland (Learning and Teaching Scotland, 2006). And the entire 3-18 Curriculum is currently under review (Scottish Executive, 2004a) with a reduced emphasis on academic subject content in favour of the wider development of *capacities*. While the Curriculum Review is predicated on developing the kinds of capacities for young people that outdoor study might help develop (Ross *et al*, 2006), there is also likely to be less central prescription.

As far as the current Scottish Curriculum is concerned, outdoor study of the natural (and other) environments is 'encouraged' at all levels. The Curriculum guidelines for 3-5 year olds (Scottish Consultative Council on the Curriculum, 1999) apply to a variety of learning contexts, including the home and community. They offer opportunities for both the study of natural heritage and the use of the outdoors. One of their broad aims is to encourage children to 'explore, appreciate and respect their environment' (Ibid: 2). For 5-14 year olds, the main relevant part of the Curriculum is 'Environmental Studies' (involving the natural, social and technological sciences). There is recognition in these guidelines that '[t]he environment provides a powerful learning medium...' (Learning and Teaching Scotland, 2000: 4) and pupils are expected to learn in a variety of school and out-of-school settings: 'for example through fieldwork and local visits' (ibid: 17) within the bounds of health and safety (Ibid: 25). And a wide range of 'school-age' National Qualifications refers to the possibility of outdoor study. For the purposes of this study, geography and biology qualifications merit more detailed consideration (and it was biology and geography teachers that we surveyed in secondary schools). There are clear opportunities here for studying outdoors, both in terms of content, such as ecosystems and glacial environments, and skills development. But, at all levels in the qualifications system, outdoor study is encouraged in a rather neutral manner – one of the strongest statements is:

It is not mandatory, but highly desirable, that candidates undertake fieldwork, collectively or independently, to apply the selected methods and techniques identified (Scottish Qualifications Authority, 2002: 29).

The entire Curriculum for 3-18 year olds, in fact, supports outdoor activity but does not prescribe it (only some geology qualifications might be more prescriptive and this is a very minor subject in Scotland (Scottish Qualifications Authority, 2004)). A more detailed analysis of this claim can be found in Higgins *et al* (2006) and it is difficult to conceive that such a consistent picture can be coincidence. And the official curriculum is anyway officially not legally prescribed in Scotland. The quality assurance framework (Her Majesty's Inspectorate of Education, 2001) does not refer directly to educating out-of-doors either. These multiple layers of *non-prescription* are very important in interpreting our data (below), because official Curricular relevance is the reason most publicly offered by teachers, in school decision-making discourse, for taking students outdoors to study nature.

#### METHODS

Our research brief concerned teachers' approaches and attitudes to engaging with

the natural heritage through the curriculum (though we will be largely discussing the attitudes aspect of this here). We sampled in an urban Local Authority (City of Edinburgh Council) and a rural one (Highland Council sub-region: Inverness, Nairn, Badenoch and Strathspey). Short questionnaires were sent to all primary schools and to all Principal Teachers of biology and geography in all secondary schools in these two areas. We selected geography and biology because of their important Curriculum links to the outdoor study of nature. We sent out 211 questionnaires in total and received 98 returns (46%). The return rates were higher for the 66 secondary biology and secondary geography departments (from 33 schools) that we sent questionnaires to, at 59% (of 46 sent) in Edinburgh and 75% (of 20 sent) in Highland. Primary school return rates were 48% (of 48 sent) in Highland and 34% (of 97 sent) in Edinburgh.

The questionnaire was very short and is discussed below. One of its main functions in this analysis was to help create a sub-sample of 20 interviewees for further participation in the study. We interviewed 12 secondary teachers (6 in each Authority, of which 3 were biology and 3 were geography teachers) and 8 primary teachers (4 in each Authority, mostly Head Teachers). Our interview sample was from those questionnaire respondents who agreed to participate further. The interview sample was also stratified, where possible, to involve a range of participants by quantity of outdoor activity provided, outdoor contexts used (both obtained from questionnaire responses), and the published roll (size) of the school. This was to try and avoid systematic bias in the overall sample, across which we will be generalising to a large degree. The focus of this study is on teacher attitudes in the context of their work and we are trying to sample widely rather than theoretically.

The questionnaire was a single sheet of A4 and offered a series of small free-text response spaces to questions concerning: what topics were studied outdoors; what topics might be studied outdoors; and what factors affect decisions to study outdoors. These were analysed using a pre-specified coding frame with categories such as 'Topics', 'Opportunities', 'Barriers' and 'Motivations', for example, which were known in advance of the questions being constructed and are the equivalent of a 'start-list', in the terms of Miles and Huberman (1994: 58). The questionnaire also offered tick-boxes for 'contexts for outdoor study' (respondents were offered: 'School grounds'; 'Local area within walking distance of school (woods, park, green space)'; 'Day long excursion for an event (project, field study visit)'; 'Residential outdoor education or field study centre involving at least 1 overnight stay'). Reliable information on quantity of outdoor activity is available from Mannion *et al* (2007) and a more generalizable picture of provision in England is provided by O'Donnell *et al* (2006).

While our questionnaire provided context information, much of the subsequent analysis is based on the interviews, although their coding was to some extent framed by our work on the questionnaire data. The interview schedule was constructed after general questionnaire data analysis and was designed to probe in greater detail the issues that arose generally (rather than those specifically raised by the interviewee in their own questionnaire return). The interview was piloted and refined with non-sample primary and secondary teachers. Interviews were conducted in schools with the relevant teacher (the same teacher that filled in the questionnaire in most cases). This meant the Head Teacher in all but one primary School and the responding geography/biology teacher, usually the Principal Teacher of the subject, in secondary schools. The shortest interview time was 35 minutes and all interviews were tape-recorded and transcribed before analysis.

One researcher coded the questionnaire data and the resulting coding frame was inter-rated by a second. There were two interviewers, who analysed the transcripts of their own interviews in the light of this coding frame (so not on a grounded basis, but accounting for points that were counter to, or outlying from, the coding

frame). The final process of collecting together emerging themes was the result of a collaborative writing process involving these two analysts.

## FINDINGS

### *Patterns of Activity*

Before turning to the complexities of teacher decision-making, we can first present some basic information concerning the contexts and activities involved in the outdoor study of nature organised by the teachers in the study who responded to the questionnaire. Nearly all responding primary schools used the school grounds and nearly all used the local area (3/56 questionnaire returns said they did not). All the Highland (rural) primaries used day-long excursions, as did 28/33 Edinburgh (urban) primaries. All but one returning secondary biology department used the school grounds and about half used the local area. Secondary geography departments were less likely to use the school grounds than biology departments but were more likely to use the local area, with 11/15 returning departments doing so in Edinburgh and 7/8 in Highland. O'Donnell *et al* (2006: 22) note that, in England, geography students are more likely to experience day-excursions than science students and this might equate to the school grounds versus local area distinction noted here. Work by Mannion *et al* (2007) and McKendrick (2005) provide additional data on the patterns and context of outdoor activity in Scotland.

### *Topics of Study*

We coded a very wide range of topics studied in the outdoors, especially for the primary schools and geography departments who returned questionnaires. This conclusion is true both for topics that were currently studied outdoors by respondents' pupils, and topics that respondents thought they would like to arrange outdoors but currently did not. By way of a few examples, primary schools referred generically to 'science' and 'environmental studies' as well as to more specific topics such as 'seasons', 'seashore studies', 'woodlands' and 'astronomy'. Geography departments mentioned many topics from 'slope analysis' to 'land use management', 'glaciation' and 'fieldwork'. And biology departments included 'practical techniques', 'food-chains' and various 'ecosystems'.

Crucially, both questionnaire and interview data suggests: (a) that when schools go outdoors there is a tendency to study what is around them<sup>3</sup>; and (b) that such local resources (from school grounds to local area) are seen as greatly facilitating (for various reasons) the outdoor opportunities that both primary and secondary teachers said they could offer. For example, one teacher suggested that 'we are very fortunate here because we are right in the heart of opportunities to go out'. These local resources are exploited as widely as they can be against a range of Curricular topics. This seems rather obvious but what is important about it is that the official Curriculum is seen as non-constraining – given a particular locale, there will be some Curricular topic that can be studied through it. Biology teachers, for example, noted that the Curriculum does not specify which ecosystems needed to be studied, but that certain techniques should be studied, allowing huge scope for using whatever local ecosystem resource was available, even in the school grounds. In fact, teachers perceive the Curriculum as providing more opportunities to study topics outdoors than they are able to realise, even if they feel able to organise lots of outdoor learning. On the other side of the coin, those who feel less inclined to take children outdoors are *not* constrained by a *lack of* Curricular topics. This is important because, in arguing for outdoor study within their institutional contexts, Curriculum relevance appears to be an important part of Scottish teachers' negotiating positions (see below). Yet from our interview data it appears not to be a sole, determining factor. This *necessary* attention to Curriculum relevance that

is, in itself, not *sufficient* to explain teacher motivation is our concern in this paper. This point, drawn from the straightforward category ‘Topics’ in our analysis, turns out to be more complex when we examine the ‘Motivations’, explored especially in our 20 in-depth interviews.

### *Motivations*

The role of the Curriculum in motivating teachers is subtle. The strongest patterns in interviews with secondary teachers were that: (a) all interviewees declared that outdoor study was integral to their discipline (biology or geography); (b) all declared that, nonetheless, they were in no way compelled to undertake outdoor study by the Curriculum or syllabuses; (c) most declared that, nonetheless, Curriculum relevance improved the status of proposed outdoor opportunities in the decision-making process, both in their own calculus and in that of any wider school decision-making (which often involved the approval of school management). All primary school interviewees, too, looked first to the Curriculum: ‘[we] start from the curriculum because that’s what we are bound by and if we can use the outdoors then all to the good...’ Outdoor study played an *enhancing* and *reinforcing* role in their responses but was not judged to be prescribed. (The picture is more complex for pre-school provision where respondents thought that outdoor activity is ‘built in, just because it’s part of their learning experience’).

If the Curriculum is neither prescriptive nor constraining (see sections above) then despite its dominant position in the narrative of justification and decision-making, there must be more to teacher motivation to organise study outdoors. The other *motivation* ideas that appeared in questionnaire and interview data were ultimately categorised as: *some topics lend themselves especially to outdoors study*; and *firsthand experience is valuable in other ways*.

The *some topics lend themselves especially to outdoors study* category included ideas such as teaching and learning of certain things are simply ‘better’ outdoors, or ‘lend [themselves] to outdoor study’ or are easier to do, or even ‘have to take place outdoors’ (in the case of some practical activities). Typical examples included the study and measurement of rivers in geography, and the ‘measurement of abiotic factors is far easier outdoors’ in the case of biology. ‘Visits’ to the shoreline, for example, were cited by primary schools. Claimed advantages included the increased variety of learning approaches and one secondary interviewee even suggested that this resulted in improved examination results. Although this is similar to the *enhancing* and *reinforcing* discussed above, the distinction we are making is that these responses are moving away from the Curriculum content being enhanced/reinforced and more towards generic pedagogical advantages of outdoor study.

Whether our interviewees are making these distinctions themselves is open to challenge, but the subsequent category is more robustly different. The *motivation* idea that *firsthand experience is valuable in other ways* contained a range of data from both questionnaire and interview sources and was subtly related to the above (it included ideas such as ‘enhanced learning’ that were not attached to any topic or Curricular outcome). But it also included simple statements concerning the value of ‘first hand experience’ and of being ‘good for all the senses’. The category goes even further however. Three primary teachers made reference to the idea that they needed to rectify the situation that pupils did not go outdoors with their families. Teachers also raised benefits such as: pupil awareness of location; care for location; enjoyment; overcoming feelings of intimidation in rural places; overcoming repulsion to the material world (and ‘flesh’) that is engendered in their ‘sterilised’ lives; and helping with staff-pupil relations (including with ‘difficult’ children – though see sections below). Some interviewees made broad statements:

I think that you shouldn’t underestimate the impact of putting children

– these are teenagers that you see outside, 15, 16 year olds – you shouldn't underestimate the impact that putting them in an environment they're not used to has on them and how long-lasting that kind of experience is because it becomes a particular place, a particular event and a particular series of interactions which is a specific memory that you can draw back things out of (Secondary Teacher).

So in this section we have shown that teachers are expressing their beliefs in two related ways. The first is the belief that some topics/subject areas lend themselves well to learning in the outdoors. The second belief is that direct experiences of the outdoors (and, in the context of our discussions, nature outdoors) are valuable, and in some cases essential, for learning, and for personal and social development (and these two things are not necessarily separable). This tends to suggest that teachers are linking conceptual learning (which is prioritised in the Curriculum) with other outcomes through direct experience of nature. The conceptual learning may relate to the study techniques that are required for direct observation of nature, for example. But there are also cases being made for experiential approaches to learning *per se* – that the act of observation, and the act of working together to achieve observation, is significant. Finally, while O'Donnell *et al's* (2006) data from England deals with a number of subtle distinctions between the education sectors surveyed, this broad range of what we are calling 'motivations' for 'education outside the classroom' (in general) also pertains there.

Although based on different coding categories, in terms of argument the separation of the above sections may seem a little arbitrary. But their order is designed to offer, in narrative form, a spectrum of response that moves progressively away from Curriculum content relevance being the sole determinant of teacher motivation to organise outdoor study, even though it is often the most explicit justification offered. For example, compare the following two statements by the same secondary school biology teacher. The first expresses his general concerns with outdoor study, and the second his description of how he argues for them with senior management:

I'm very much pre-disposed to [outdoor study] and that's one of the reasons I'm a biology teacher. I've always viewed it as an imperative if not an entitlement for pupils studying biology... And I also feel that there's a tremendous benefit in terms of other types of learning; so using the curricular imperative to gain benefit in other ways, social skills, awareness of a different agenda outside in the country...

... and I have argued this case with my Head that in the case of biology and geography it's not quite the same as say for music or maths (no maths doesn't run trips), English to theatre or Art to an Art Gallery. It's not quite the same because I feel there's a greater imperative – a curricular imperative that you need to follow...

Note that the 'curricular imperative' is not only taken to be the most legitimate argument with the Head *per se* (and this teacher made expansive statements about how his school operated in a results-justified culture) but also that, where the negotiation is institutionally understood to be a competition *between school subjects* for scarce resources, it is taken to be the strongest argument available (social skills are perhaps just as likely to be developed on a theatre trip as a field trip). A few of our respondents referred *only* to Curricular (or in some cases subject) relevance as their motivation for organising outdoor learning: while admitting the Curriculum was not prescriptive about outdoor learning, it was nonetheless the source of legitimacy. But even with the many who held wider motivations (such as benefits of social skill development) the discourse implied that some motivating factors are more practically

legitimate than others, as seen in the quotations above. This pattern of wider, less Curricular, advantages of outdoor study being held but being less easily played in the decision-making process - whether that be in the professional conscience of the teacher or the Curricular roots of the school institution - is the first important contribution to our discussion in this paper.

### *Contexts*

In addition to teacher motivation, our data explored the contextual and institutional factors that affected teacher decision-making. We initially coded many of these, from questionnaire returns, as *barriers*. But it became clear, especially in interview, that one teacher's supposed *barrier*, defined simply as (for example) *familiarity with the area*, was in fact seen as an *opportunity* for teachers who are familiar with the area and only a *barrier* for teachers who are not. Moreover such dichotomies may not only be due to teachers experiencing different situational facts as externals. They may also represent teachers' internal dispositions towards interpreting situational facts in positive or negative ways.

The categories of *context* then – which tended to combine complexly in teachers' interview discourse – are listed here. For the purposes of our argument, and in order to give a sense of relative dominance of certain categories in the questionnaire data, we have here decided to quantify the instances of text that were coded from questionnaires against each category (in brackets, at the end of each category). These numbers are number of times *x* was mentioned across the questionnaires *not* number of questionnaires that mentioned *x*:

- *cost* (including cost of transport, of staff to cover absent staff's classes, of staff to attend the trip; and of the problems of whether and how much to pass on to pupils' families and issues of access and inclusion) (87 instances in questionnaire data)
- *time* (or lack of it, for planning and organising) (85 instances)
- *adult/pupil ratios* (including lack of, or cost of, helpers and staff to meet safety guidelines for trips, which are themselves a rather grey area for nature study (as opposed to adventurous activity) and which ranged in teacher estimation from 1:2 at pre-school to 1:15 for secondary field study) (68 instances)
- *safety* (including off-putting media publicity, 'pressure of accountability', 'liability' and 'insurance', parental consent, risk assessment and fear of litigation, behaviour of unruly pupils [c.f. 'difficult pupils' in section on motivation, above]) (55 instances)
- *weather* (including the planning and timing of excursions, and mixed views on concern for younger children, the provision or absence of suitable clothing, and the enjoyment or otherwise of the experience) (31 instances)
- *transport* (including cost, coach hire, coach access to field sites, minibus availability and booking, minibus driving certificates, and minibus sizes in relation to class sizes) (29 instances)
- *disruption* (to curriculum coverage, to curriculum coverage for exam results, to the teacher's other classes, to other teacher's classes with the missing students) (21 instances)
- *qualifications and expertise* (mostly concerning lack of specialist knowledge of the natural environment to be studied, especially among primary teachers but also, for example, as 'textbook geographers' or 'as a micro-biologist'; and mostly *excluding*, unless probed, outdoor-related qualifications other than first aid) (4 instances)



More detailed analyses of these factors are offered in Higgins *et al* (2006) and the list is in decreasing order of instances. The position of *safety* is rather further down the list, we believe, than public discourse might lead even an education observer to expect. It is dangerous to read too much into this quantitative, cross-case, data<sup>4</sup>. But in interview, too, teachers discussed safety as simply something to be managed, only in a few cases spontaneously raising it as an intractable barrier, let alone *the* intractable barrier. It was a matter of learning from more experienced teachers, staying within comfortable limits, thinking about the numbers of adults needed, the kinds of pupils who should/should not attend, and the use of external service providers (such as countryside ranger services). Indeed the idea of *safety* as a barrier often turned out, in interview, to be associated with other barriers (such as the additional *time* involved in risk assessing). Even for those who spontaneously expressed concern about safety the picture is complex:

[INT:] *What's the number one thing which you think is in the way of doing more?*

[RESP:] I think the first thing is you have, you absolutely have to have covered every single base in terms of safety and risk assessment because if you haven't and something goes wrong you're putting yourself at risk and I'm not prepared to do that, so that's one big area that tends to put you off ... there is quite a lot of paperwork and you do have to sit down and think very carefully about what the risks are which I think you would do anyway but you have to document them and some of them, it just seems a bit silly. It doesn't seem to move you any further forward it just means you've written down on a piece of paper that you've thought about this and then you have to take it through the management structure of the school and they have to be happy with it and then you have the problem that so many members of staff get upset about you taking the kids out because we've all got a lot that we have to teach, especially the 5-14 curriculum and if you take them out for a day then they don't get finished a certain piece of work somewhere else and there's quite a lot back-biting about that sort of thing.

(Secondary teacher)

The way the respondent slides from one barrier into another is typical of the teachers' preference to describe a complex of factors rather than accept the interviewers' asking for an outstanding factor. In many cases *safety* (as opposed to the effort of risk assessment) had to be raised by the interviewer:

[INT:] *What about safety, how do you feel personally about safety in the outdoors?*

[RESP:] Safety in the outdoors? Em, we have to, the children are within our care so we have to be very careful that's why we would do a risk assessment but children have to be given boundaries and rules to - so if you were working somewhere doing a pond study and they were close to the water then the rules are that they have to abide by that and be safe at all times. So the children have to have responsibility for their own safety by following the rules that you've set out and the guidance that you've set out but you have to have very aware of where you're going and what risks there might be involved in taking the children to that place. If you're out on a hill or ... you have to think about - you know - they have to be properly dressed or waterproofs and boots and things like that.

(Primary Head Teacher)

Moreover there is an overwhelming pattern in the *context* data of the importance of *cost* (and *adult/pupil ratios* are also largely a cost issue) and *time*:

[INT:] *What are the big things you really feel limited by? What's the top barrier?*

[RESP:] I would think that the biggest single barrier is the paperwork that has to be done in order to secure permission to go and in order to secure risk assessment and in order to secure the logistics of money, transport, if payment is required – hiring coaches. Clump that thing together and that is the biggest single barrier... The next big thing is if I'm going to be out of school for a day – even a day with kids – I have got to leave work for my classes and that is a significant task in itself. If I've got an eight period day then I'm leaving work for classes that has a knock-on effect on staffing in the school because somebody in this building has got to cover my class and there may be a financial implication, there may not be enough cover in the school and therefore a supply teacher has to be bought-in to cover my classes in and that is a factor the school has to bear in mind. So I would think that is the second barrier if you like.  
(Secondary Teacher)

For our discussion we will combine factors such as *cost, time, adult/pupil ratios* and develop a theme of *effort* (organisational, in terms of time, and financial) required to organise outdoor study, which is prominent in the data. These, we would argue, are rather under-represented in the public/media discourse on school outdoor study, compared with *safety*, even in contributions to that discourse by teachers and their representatives (see Background section above, and also Mannion *et al's* (2007) finding that young people themselves thought that health and safety was why teachers were disinclined to teach outdoors).

#### DISCUSSION AND CONCLUSIONS

Our analysis of the questionnaires and interviews suggested an expansion of our previous assumptions (highlighted in the Background section, above) about the contexts of teacher decision-making in relation to undertaking outdoor activity to study nature. We can idealise the complexity of such decision-making by suggesting that we should understand it as including the weighing-up of *effort* (including financial and time-cost) against non-Curricular benefits, and not only as weighing-up safety against 'legitimate' Curriculum relevance. There is an obvious implication that policy-makers should consider the resource side of outdoor study, as well as attempting to tackle the more publicly manifest safety side. But policy-makers, too, must concern themselves with what 'value' is obtained for such resources, and we argue below that the *legitimacy* of the benefits of outdoor study is the more difficult of these connected issues. How are teachers' claims of non-Curricular benefits to be legitimised in teachers' professional contexts, and what weight should be given to them anyway?

The idea of *legitimacy* can be understood in teacher decision-making as helping to prioritise the expenditure of 'effort' and, more widely, the expenditure of money. There is little existing work on teachers' decision-making regarding the outdoor study of nature, though there are related UK research theses and some international studies. Clay (1999a; 1999b) reports on outdoor and adventurous activities (as an option in the Physical Education National Curriculum at Key Stages 3 and 4 [early and middle secondary school pupils in England and Wales]). The survey of 33 schools and centres in 1999 supported the view that leadership and vision on the part of senior school staff were crucial in fostering such experiences, and that appropriate in-service training often provided the means of giving responsible staff both the skills and reassurance to provide them. O'Donnell *et al's* (2006) more recent survey involving 728 schools and 100 Local Authorities in England noted that these same factors were crucial to 'teacher confidence' about developing

'education outside the classroom', and that teacher confidence was an important factor in explaining the extent of provision of such education. There is strong support for all this in our study, where some schools manage to maintain a culture and support system for outdoor study - essentially legitimising it as school activity. But some of our teachers also suggested that these cultures and systems are inertial, are becoming fewer, and that they may be difficult to build in the face of numerous other building priorities. In a study of provision of out-of-classroom education in Oxfordshire Primary schools (Wheatley-Price, 2002), teachers and policy makers cited several factors militating against further development: lack of staff expertise; the demands of the literacy and numeracy strategies; and the need for support for staff who initiate developments.

These studies hint not only at the *effort* barrier that we have highlighted in this study but at its relation with the idea of priorities, which we are exploring here in terms of *legitimacy*. We have seen that the Curriculum is explicitly considered to be important in selecting and justifying (to the self and the institution) teachers' planned outdoor study. And yet we have also seen that the Curriculum does not prescribe or constrain outdoor study, so that teachers who undertake outdoor study *must* have other understandings of the benefits of doing so (and we have seen a range of these understandings explicitly outlined) in the face of the considerable *effort* involved. So while Curriculum relevance is an important, necessary, justification for teachers, fulfilling the Curriculum is not in itself a sufficient motivation for outdoor study. Fulfilling the Curriculum is not, therefore, understood as the sole advantage of such study, even if it is in practice the most legitimate rationale.

This has implications for the future of the outdoor study of nature. If more Scottish teachers are to arrange more outdoor study of nature, under current conditions, non-Curricular benefit needs to weigh more heavily, more legitimately, in the decision-making context. This is less likely to happen when the legitimising discourse demanded in schools, and in the professional consciences of many teachers, lies in Curriculum relevance, and attainment against Curriculum standards, and when that Curriculum has little to say about non-Curricular benefit (the Curriculum essentially de-legitimises what it omits). This is part of what we have found here. But now the Curriculum is under review (Scottish Executive, 2004a). If the new Curriculum is to retain this strongly legitimising role then outdoor study might best be served by being *prescribed* within the Curriculum. There might be support for this idea from England: Rickinson *et al* (2004: 43) suggested that the (legally-prescriptive) National Curriculum in England was not sufficiently flexible to allow for outdoor activity, and that it did not prescribe it, but that the recent (1999) changes offered greater opportunities for it (Ibid:45); and indeed O'Donnell *et al's* (2006) survey of teachers suggested that the English National Curriculum offers plenty of opportunity for education outside the classroom.

On the other hand, Scotland's Curriculum review intends to *prescribe less*, while more strongly legitimising the kinds of *outcomes* (in terms of 'whole person' development) schooling should serve, such as, for example, 'confident individuals' (Scottish Executive, 2004a). These are the kinds of outcomes that the teachers in this study believe outdoor study serves. But for this Curriculum development to result in more outdoor study, in the face of the effort and cost involved, it is likely that the connection between outdoor learning and these supposed benefits, *for the learner*, would need to be more clearly understood than through the kinds of teacher discourse presented here. Even if *attainment* is not the only focus of quality and standards in the Scottish education system (Munn, 1997), to a greater or lesser extent that system continues to embed what Peters (2003) describes as new managerialism, including techno-centric ideas of constant self-evaluation (Weir, 2003). Scottish education institutions and Scottish teachers are left with the problem of how to evaluate their work against outcomes such as 'responsible citizens' (Scottish Executive, 2004a) or

how to evaluate outdoor study experiences as a contribution to such outcomes. It is telling that O'Donnell *et al*'s (2006: 53) teachers in England report that they are least confident about *evaluating the outcomes* of education outside the classroom. And there is a more general problem here if we are to understand the outcomes of outdoor study of nature in a way that is convincing for teachers, researchers and policy-makers. Rickinson's (2004: 24) summary of research into fieldwork's cognitive, affective, social and physical impacts is only partially positive, noting that: not much has changed in 25 years; most studies are descriptive; there are 'far too many poorly conceptualised, badly designed and inadequately carried out studies'; that a focus on the relationships between specific pedagogies, or on particular groups (e.g. by gender), is missing; and that, particularly but not exclusively in areas such as environmental responsibility, there is more assumption than evidence concerning lasting impacts on student attitudes.

If there is to be more outdoor study of nature organised by Scottish schools, teacher discourse suggests that a greater policy focus on resources, instead of just safety, is needed. Equally importantly, the critically-motivating teacher understandings of its *benefits* must be legitimised in their professional contexts. If that is to happen, whether or not by Curricular prescription, there is an urgent need for such teacher understandings to be supported by an improved research evidence-base concerning those benefits for learners.

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<sup>1</sup> O'Donnell *et al* (2006), in reviewing provision in England, note more recently unchanging or even increasing provision of 'education outside the classroom', but the main area of increase concerns activities within school grounds, which is not our concern in this paper. And where they report possible decreases in activity, it is in natural settings (and in day-length and residential excursions often needed for work in such settings), which are precisely the concern of this study.

<sup>2</sup> For a recent survey in England, see Kendall *et al* (2006)

<sup>3</sup> O'Donnell *et al* (2006) make a similar point

<sup>4</sup> For example, we have not analysed the position of *safety* relative to other factors *within* cases that mention it. And we caution that we are generalising across our data, and that our data concerns only those schools that responded.