

A critical reflection on how outdoor learning can be used to facilitate high quality learning and teaching (HQLT).

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Abstract

Aims: A qualitative study aimed at evaluating the social and psychological impacts of creative outdoor learning and how it can be used to facilitate HQLT in a Key Stage 2 class.

Methods: Naturalistic observations of outdoor lessons taking place in the Forest School area of a primary school. An interpretivist methodological approach has been taken when analysing the qualitative data.

Conclusion: A review of the data showed two major emerging themes: higher levels of engagement during the lesson leading to higher levels of enjoyment. This led to an increase in self-confidence when working indoors and the children showed signs of increased motivation towards learning during their writing tasks; collaborative learning taking place through effective and purposeful communication between children led to higher cognitive skills being visible to the observers. The study has shown that outdoor learning can have positive impacts on children's learning and can be used as a means of facilitating HQLT.

Introduction

This paper is underpinned by the overarching aim of enabling the reader to deepen understanding of how outdoor learning can be used to facilitate HQLT in a class of 30 Year 3 children. It will aim to ascertain how children work collaboratively by effectively communicating with their peers. It will also aim to analyse how outdoor learning affects children's self-confidence and motivation towards learning. I have chosen outdoor learning as an area of focus for this study as I feel it is an area of learning which is under-used and under-appreciated in the schools that I have worked in. I am aiming to use the data collected coupled with related theory during this study to inform me of how my own pedagogical practice can be improved.

The study has been carried out during a week-long enrichment week in which the children will be taught the National Curriculum based on the theme of explorers. Throughout the outdoor lesson, children are attempting to find clues as part of a 'police investigation'. Observations will take place during an outdoor lesson delivered by a group of three associate teachers. An observation sheet - which is to be completed by the associate teachers as well as the teaching assistant - will provide me with a collection of qualitative data. Data analysis will aim to explore the impacts that outdoor learning has had on these children's learning. Factors such as children's engagement, collaboration with peers and self-confidence levels shown before, during and after outdoor lessons will be reviewed. It will also aim to provide teachers with knowledge of and recommendations on how outdoor learning can be used to facilitate HQLT.

Literature Review

With the relatively recent emergence of Forest Schools in the UK, there has been an upsurge in research surrounding the topic of outdoor learning. It is important to note though, that outdoor learning is not restricted to Forest Schools, rather, Donaldson & Donaldson (1958) and Ford (1986) define outdoor learning as “education in, about and for the out-of-doors.” Although many studies have found a positive link between learning in a natural environment and pupil attainment levels (Roggenbuck & Loomis, 1990; Dymont, 2005; Waite, 2010; Woodland Trust, 2019), there remains a lack of a number of schools using this beneficial resource to teach the National Curriculum (Forest School Association, 2019). With numerous studies stating that outdoor learning can also have positive physiological impacts in children (Weaver, 2018), the majority of schools may be missing out on a potentially advantageous avenue to help tackle the increasingly alarming rates of overweight children in the country. NHS (2019) figures show that around 10% of all children in the UK are classed as obese. In response, according to the BBC (2019), The Department of Health have devised a proposal in a bid to halve childhood obesity by 2030. Part of the plan includes the introduction of the ‘daily mile’ as well as parents and schools encouraging children to be more physically active by using the outdoors.

The government have also committed to schools teaching outdoors as part of the Department of Environment, Food and Rural Affairs’ 25 Year Plan to Improve the Environment. Government (2019) state that children will create better relationships with the outdoors through Forest Schools and subjects such as science and geography being taught outdoors will help to improve children’s fieldwork skills. As well as Forest School and the National Curriculum being taught outdoors, outdoor learning can also take place in the form of natural play (Holt, 2017).

Studies have also found that outdoor learning can have positive impacts on children’s mental health, confidence and motivation towards learning (O’Brien, 2009). However, confidence and motivation can be difficult to measure (Tough, 2016). Coe et al (2014) state that one of the dangers when carrying out observations of children in education is that we tend to focus on observable proxies for learning, they suggest that rather, learning can be invisible. According to Bloom’s Taxonomy of Educational Objectives, learning can take form in the development of higher cognitive skills such as analysis, synthesis and evaluation (Anderson & Krathwohl, 2000) as well as critical thinking, interpretation and self-regulation (Schraw & Robinson 2011). The thought processes of the child maybe invisible to the teacher, however assessment can take place depending on the outcome. On the contrary, Hattie’s meta-meta-analysis (mega-analysis) found that teaching is successful when learning is visible to the teacher (Terhart, 2011) as feedback can only be given to the learner on learning which is visible (Hattie & Clarke, 2018).

The study also found that the teachers noticed how the children had also become more independent in the classroom after taking part in outdoor lessons. Although a study by (Fuller et al, 2017) focused on older (secondary school) children, it also

concluded that outdoor learning experiences made students feel more confident about how they saw themselves as learners and this had positive impacts on their learning whilst indoors.

Social interactions with peers in the class was also a common improvement in children after outdoor lessons (Mannion et al, 2015). Teachers had acknowledged during this study that collaboration when working in groups had improved after children had been exposed to the opportunity of collaborative working in the outdoors. By the very nature of being outdoors, children will potentially have more opportunities to communicate with their peers than they may have when learning in the classroom. Kuo et al (2018) also argue that teachers should take advantage and engage their participants in more outdoor learning as their study found that outdoor learning had positive after effects as children engaged more in subsequent indoor lessons.

However, some studies have also suggested that there can be barriers to overcome when outdoor learning is concerned, teachers were found to have safety concerns when taking children outdoors (O'Brien & Weldon, 2007). Risk assessments are a must prior to the outdoor session to ensure there are no physical risks to children or they are at least minimised.

Others have suggested that outdoor learning is only beneficial to students when it is coupled with focused indoor learning (Sullivan, 2016). An orienteering lesson outdoors may have physiological and social benefits to children, but would not be as beneficial if the children could not read maps correctly. The skill of reading different types of maps may be a lesson taught indoors before outdoor learning can take place effectively.

It is widely believed that effective high-quality teaching will lead to high-quality learning in learners. Higgins et al (2014) define effective teaching as that which results in achievement by learners using outcomes that matter to their future success. The term outcome-based education has been used (Spady, 1994; Holmboe & Harden, 2017), in which educators organise a system around what learners should be able to do at the end of the learning experience. A blend of indoor learning with the outcome as the objective i.e. learning how to read maps, coupled with an outdoor orienteering lesson may have more potential for HQLT than a standalone outdoor lesson.

It is safe to assume that high quality learning will more likely take place when children are fully engaged and enjoying the lesson. Darling-Hammond (2000) suggests that one of the many facets of HQLT is to increase engagement and enjoyment in learners through active learning. The increased space available outside on school grounds provides an ideal opportunity for practitioners to engage learners in enjoyable, creative and active learning outdoors. Although enjoyment whilst learning has on the whole, been mainly attributed to early years, the need for engagement in an activity with the aim of achieving an end goal or reward can be applicable to learners of all ages, according to the self-determination theory (Britto et al, 2017).

In summary, the majority of studies on the topic generally favour the use of outdoor learning in schools (Sahrakhiz et al, 2018) as it can promote general student well-being (Largo-Wight et al, 2018). Outdoor learning has been found to improve children's learning experiences through Forest Schools, teaching National curriculum subjects and natural play. It allows children to become exposed to opportunities to become more engaged and enjoy the lesson. As well as the physiological benefits, it also promotes self-confidence and ability to work collaboratively (Austin et al, 2016) when supplemented with focused indoor learning.

Methodology

Given the time constraints, the research strategy chosen for this study is practitioner research. Practitioner research is one of the dominant educational research paradigms (McNiff, 1986) and is used to provide clarity and deeper understanding of an environment (Candy, 1989; Zuber-Skerritt, 2018). It is seen as a middle ground between reflection and action research (Dujin et al 2010). It allows the researcher to build knowledge and theory around the action as it unfolds (Coghlan, 2019). Israel et al (2019) also suggest that when compared to other research strategies, which aim to create knowledge only as an outcome, it can be a more valuable approach to research as it can inform future action to improve practice. In particular, it can be especially useful in the education sector as it engages educators in reflective practice, which can help to improve pedagogical practice (Mertler, 2016). In this instance, I am aiming to use this research as a tool to build on my knowledge on the effects of outdoor learning and use this to improve my pedagogical practice in the field.

Observations have been preferred as an appropriate methodological approach for this study as it enables researchers to get an idea of the current situation in its real-world environment (Merriam & Tisdell, 2015). Gianoustos (2019) also suggests that carrying out observations has many benefits for teachers as well as students. They provide teachers with solutions to problems in the short-term and can provide them with the possibility of using alternative teaching strategies to improve their practice. Students may also benefit from observations as improved pedagogical teaching practice can have positive impacts on the children's learning (Haep et al, 2016). Moreover, class observations have been found to be a low-cost tool to aid teacher development (Mueller & Schroeder, 2018). As the study is being conducted on a minimal budget, observations have been deemed as an ideal approach to collect the data.

It is important for me to recognise that my personal experiences, beliefs and philosophies surrounding outdoor learning may negatively affect the data analysis, known as observation bias (Hagel et al, 2015). This is especially prevalent during studies in which researchers expect particular results (Holman et al, 2015). Althubaiti (2016) suggests that observation bias can impair the reliability and validity of the data. To improve the reliability and validity of the data, multiple observers have been tasked with observing the same outdoor lesson, ultimately producing a more accurate dataset (Kosmala et al, 2016) through triangulation.

As the data being collected will be of a qualitative nature i.e. in the form of language rather than numbers, the research will take on an interpretivist philosophical stance. It will allow for the observers' subjective views of the behaviour occurring (Pulla & Carter, 2018) during the outdoor lesson and will allow them to make sense of the situation in their own way (Mason, 2017).

Ethical considerations

Approval to conduct this study has been sought from the relevant authorities prior to its commencement. The study was found to have no ethical issues as it posed no risk to the participants and as a result has been deemed ethically sound. Participants have also been asked for their permission to take part and their general role in the study has been explained to them clearly. However, Taylor et al, 2015 state that it is important to not reveal the specifics of the study as there is a danger that participants will be influenced by this knowledge and not act as they would normally throughout the study. They have also been given assurances that anonymity will be maintained throughout and the data collected will remain confidential and secure during the study. It has been made clear that participants have a right to withdraw during the study if they so wish.

Results and discussion

The aims of the study as set out were to determine how outdoor learning can be used to facilitate HQLT. It was hoped that the findings would provide a deeper understanding for practitioners of how outdoor learning affects children's self-confidence and motivation to learn and ability to work collaboratively whilst outdoors. The ultimate aim of the study is to then use the primary and secondary research, as well as the data analysis to improve my own teaching practice.

Data analysis was conducted using the thematic analysis technique, which is a method widely used for sifting through datasets to capture patterns or common themes within the data (Braun et al, 2019). A typical qualitative data analysis will consist of coding, sorting and sifting of the data (Chowdhury, 2015), which is what has also been used to analyse the findings. The data was repeatedly read over until themes began to emerge through similar wording being used by the observers, compared with each other and coded appropriately. The associate teachers used for the observations will be referred to as T1, T2, T3 and the teaching assistant as T4.

From reading the observation sheets, one clear theme emerging from the data is of 'children being engaged throughout the lesson'. The theme can be broken down into subthemes: 'engagement before the lesson' and 'enjoyment during the lesson'. It was reported by the observers that the children were engaged throughout the whole activity. It was evident that they were listening attentively to the instructions given to them by the police before and during the activity. T2 stated that 'the children seemed very excited about the prospect of going outside'. T3 also suggested that 'the children seem to be enjoying the lesson and this was evident as they were looking at

each other excitedly when they saw the police. They seemed intrigued to find out what the lesson was about'. T4 also stated that 'the children have probably never experienced anything like this i.e. working with the police', and '... it was obvious that they were listening carefully to what the police were teaching them about using evidence bags. They were very curious about it'.

I believe the children were engaged before and during the lesson as it was of a creative nature. As it was probably the first time the children have taken part in a lesson involving the police, the excitement was apparent to see. The data correlates with the findings of the (Darling-Hammond, 2000) study which found that enjoyment of a lesson occurs when a child is engaged with a lesson and one way of achieving this is exposing children to active learning.

However, it can be assumed that the majority were engaged throughout as it was heavily supervised with six adults present. Although the children, on the whole, were engaged throughout, it may have been a different experience if the class was being managed by one class teacher alone. It may not have been possible for all the children to be constantly supervised and misbehaviour from the children may have been a hindrance to their engagement and enjoyment.

In addition, it was interesting to see that when the children went back inside (for a 'press conference' with the police officers), the children asked multiple questions to the officers. T4 stated '...it was a pleasant surprise to see that even the quieter children were asking questions and I could see that they were very much engaged in the press conference'. This suggests that placing a child – who is usually seen as a quieter individual – in situations where they are engaged and enjoying the lesson, can increase their self-confidence and motivation to learn.

The lesson also seemed to have positive aftereffects and this was realised when assessing the children's writing as they were tasked with writing a newspaper article (linked to the outdoor activity). It was clear to see that the children had used their learning from the outdoor activity, to create newspaper articles which I believe were of a high quality, meaning high quality learning had taken place.

Another theme to arise from the data analysis is that of collaborative learning. As mentioned earlier, the children were placed in groups. T3 noted that there was 'plenty of purposeful discussion' amongst their group. It is important to note that the discussion taking place in this group was purposeful rather than aimless and irrelevant. T1 noticed that 'communication from one member of the group had led to others in the group becoming more engaged in the learning'. Whereas, T2 also stated that 'there were different forms of communication visible, lots of pointing and shouting in excitement'. It is clear from these examples that collaborative learning had taken place in this session and it was evident in all of the groups. T4 also detailed a portion of the conversation that was heard when her group found some evidence:

Child 1: "*There's lots of evidence here.*"

Child 2: "*Maybe we'll find the dog here before the other groups.*"

Child 1: “*But they’ve found some fur near that tree, I think it might be over there.*”

Child 2: “*Let’s go check there then before they do.*”

This dialogue between the two children illustrates how the children are not simply learning by making a note of the knowledge they have gained, but synthesising this information together to make calculated judgements in order to get to their end goal. It is showing that higher order learning is taking place, whereby a base of factual knowledge has been used to make an evaluation, according to Blooms Taxonomy of Educational Objectives (Agarwal, 2018).

Conclusion

During this creative week, I have experienced first-hand how outdoor learning has provided children the opportunity to engage in activities which may not be possible indoors. It has provided me with the opportunity to broaden my knowledge on the positive impacts of outdoor learning on children’s learning. Two major themes have emerged from the findings: by making lessons enjoyable, children become more engaged in the lesson which leads to higher levels of motivation to learn during a linked activity indoors; collaborative learning, which leads to higher order thinking and learning.

Additionally, it is not only the children who seem to have enjoyed the experience. As the teacher, I have thoroughly enjoyed taking part in this creative week and I aim to take much of what I have learnt during this study into my professional practice. However, it is important for me to recognise that, due to timetable and staffing constraints, it may not be possible for me to engage in an outdoor learning approach as often as I would like.

Whilst I recognise that the dataset is fairly small and it may not be a true reflection of other school’s/children’s attitudes towards creative outdoor learning. I see no reason why I cannot embed creativity into my teaching and use the outdoors as much as possible to help positively impact the social and psychophysiological functions of the primary school children in my future classes.

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