

# **Nature's Classroom: A Review of Motivators and Deterrents for Teacher Engagement in Outdoor Education Field Experiences**

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## **Abstract**

Although interaction with natural environments has been recognized as supportive to children's overall health, learning, and behavior, the decision-making process of teachers who implement outdoor education field experiences is not well understood. This narrative review summarizes the literature exploring motivators and deterrents for teacher engagement in outdoor education field experiences. Twenty-two articles met the inclusion criteria and were included in the review. This review further explains the facilitators and barriers for teacher decision making and implementation of outdoor education field experiences, providing support for teacher education and a point of entry for future study of teacher motivations.

KEYWORDS: outdoor education; field experiences; motivators; teachers; deterrents

Reflective of lower activity levels in today's youth, the occurrence of obesity in preschool-aged children and adolescents has doubled in the last 30 years and has more than tripled for children aged 6–11 years (McCurdy, Winterbottom, Mehata, & Roberts, 2010). With the anticipated continued decline in health status, today's children are the first generation expected to have a shorter life span than their parents (McCurdy et al., 2010). Trends in the next generation's health outcomes are alarming, but a growing body of evidence suggests the beneficial impact of participation in outdoor education activities. To elaborate on the host of related benefits is beyond the scope of this discussion. However, strong evidence supports outdoor activities in the promotion of physical health and development, cognitive functioning, higher academic achievement, psychological wellness, management of mental disorders (attention-deficit/hyperactivity disorder), reduction in vitamin D deficiency, stress management, enhanced social relationships, and environmental citizenship (Amos & Reiss, 2012; Becker, Lauterbach, Spengler, Dettweiler, & Mess, 2017; Johnson, Christie, & Wardle, 2010; McCurdy et al., 2010; Rickinson et al., 2004).

Although the health-related benefits of positive interactions with and in nature have been well documented, a pervasive decline in outdoor play has been reported for today's children and adolescents around the globe. For example, a 2-year study in England found that more than 1 in 9 children had not set foot in a park, forest, beach, or other natural environment in 12 months (Natural England, 2016). In response to parental fears of natural surroundings, restricted access to natural areas, and the lure of electronic devices, Louv (2008) coined the phrase "nature deficit disorder" to describe how human beings, especially children, are spending less time outdoors. The nature deficit disorder is termed not as a technical diagnosis, but rather as an association between a lack of time spent in the outdoors and a wide range of developmental and behavioral issues, and loss of opportunity to build connections with nature. Driessnack (2009) further extended the notion of a nature deficit disorder, suggesting that children are losing the ability to relate to others' life experiences, because they are unable to experience their own world directly.

Many people recognize outdoor education as a key aspect of the educational process, with a compelling line of evidence surrounding the important role that teachers play in their ability to have a positive influence on students through outdoor education. However, not all teachers are interested in including outdoor education curriculum, and some challenges impede the efforts for teachers who do try. Using a mixed methods approach, Sosu, McWilliam, and Gray (2008) explored the complex network of factors that influence a teacher's choice to engage in outdoor education, and they further emphasized the importance of understanding teachers' experiences in relation to this decision-making process. Although research is building, the reasons why some teachers decide to implement outdoor education and others do not are still not clearly understood (Stern, Wright, & Powell, 2012).

The purpose of this narrative review is to further explore factors that may influence the teacher's decision-making process and to further identify what may encourage and/or deter teachers from engaging in outdoor education field experiences. The study of outdoor education has many terms of reference that may be confused and/or used interchangeably. This narrative review drew upon Fagerstam's (2014) description of outdoor education as elementary and secondary school-based curriculum learned in a natural environment such as on school grounds or off-school grounds such as in a nearby forest or natural local area. This expression of outdoor education suggests the use of natural surroundings where learning is demonstrated through an experience-based process and/or social and communicative processes. Such processes engage students in practical outdoor activities that connect bodily movements with mental activity (Fagerstam, 2014). The concept of field experience is synonymous with outdoor education activities in this description. Field experiences provide a venue for outdoor learning and offer many benefits that cannot be achieved in the classroom. As Tal, LavieAlon, and Morag (2014) described, field experiences can be viewed as student experiences held outside of the classroom, held at interactive outdoor locations, and designed for educational purposes.

An initial scoping of pertinent literature determined that the research was too heterogeneous for a systematic review, as recommended by the Centre for Reviews and Dissemination (2016). For this reason, this narrative review provides a summary of literature investigating factors that influence a teacher's decision to participate in outdoor education field experiences. Specifically, the review explores the following questions:

1. What factors motivate a teacher to engage in outdoor education field experiences?
2. What factors deter a teacher from engaging in outdoor education field experiences?
3. How might future studies best support our understanding of the decision-making process of teachers in regard to participation in outdoor education field experiences?

## Method

An extensive review of peer-reviewed journal articles in electronic databases including Education Research Complete, Embase, PubMed, Google Scholar, PsycINFO, PsycARTICLES, and Sage Journals Online was conducted. Terms searched individually and in combination included *nature-based education*, *outdoor education*, *field trips*, *field experiences*, *off-campus*, *teacher*, *perceptions*, *motivators*, *barriers*, and *decision process*. Because the literature uses a diversity of terms to refer to outdoor education field experiences, the review was expanded to include publications containing other terms such as *nature-based learning* and *environmental education*. Relevant articles were further reviewed and pertinent references in relation to the topic of review were identified. Inclusion criteria included (1) English-language publications, (2) research that focused on the motivators and deterrents for teacher engagement in outdoor education field experiences, and (3) research published between 2000 and 2017. Publications were excluded if they were (1) focused specifically on classroom-based environmental education, (2) published before 2000, and (3) not peer reviewed. The intention of this narrative review was not to discuss and list every published report or article, but rather to describe the key themes across the literature related to factors influencing teachers' decision making for partaking in outdoor education field experiences.

In total, 22 publications were reviewed. Table 1 lists primary analytic interests and corresponding articles. To summarize, most of the articles considered the influence of outdoor education experiences for children, while fewer studies were concerned with field experiences specifically. Other publications concentrated specifically on adolescent age groups, while several studies explored teacher perspectives on field experiences in general. The majority of the studies used qualitative and survey methodologies, with few studies employing a quantitative design. The overall strength and volume of the evidence was somewhat limited, although the reviewed research reflected anecdotal understandings behind teacher motivations for and deterrents from engaging in outdoor education field experiences.

## Results

Assembling the evidence from the included literature led to the identification of two major categories: (1) Observations of student benefits inspire teacher motivation, and (2) barriers in planning and implementing field experiences deter teacher motivation.

### Observations of Student Benefits Inspire Teacher Motivation

The key motivators for teachers to engage their students in outdoor education were centered on how to best support student health and success.

**Connection with curriculum.** Behrendt and Franklin (2014) suggested that teachers are strongly motivated to engage their students in field experiences for curricular-based advantages such as providing firsthand outdoor education experience, to stimulate interest and motivation in science, to add relevance to learning, and to strengthen perception skills. When students

**Table 1**  
*Primary Analytic Interests of Papers Reviewed*

Primary analytic interests	Corresponding articles
Influence of outdoor education experiences for children	Blanchet-Cohen & Elliot, 2011; Carrier, Tugurian, & Thomson, 2013; Dowdell, Graya, & Malone, 2011; Eick, 2012; Ernst, 2007, 2014; Graham, 2013; Kisiel, 2005; Knight, 2011; Lindemann-Matthies & Knecht, 2011; Moseley, Huss, & Utley, 2010; O'Brien, 2009; Ross, Nicol, & Higgins, 2007; Spence, Wright, & Castleden, 2013; Tan & Pedretti, 2010
Field experiences and specific effects	Blanchet-Cohen & Elliot, 2011; Carrier, Tugurian, & Thomson, 2013; Kisiel, 2005; Tal, LavieAlon, & Morag, 2014; Waite, 2011
Specific adolescent age groups	Ernst, 2007; Fagerstam, 2014; Knight, 2011; Moseley, Huss, & Utley, 2010; Stern, Wright, & Powell, 2012; Tan & Pedretti, 2010
Teacher perspectives on field experiences in general	Anderson, Kisiel, & Storksdieck, 2006; Behrendt & Franklin, 2014; Rebar, 2012; Ross, Nicol, & Higgins, 2007

observe experiences in natural settings, they better relate meaning to what they are learning in the classroom. Kisiel (2005) performed a quantitative study, surveying 115 Californian elementary teachers, and Lindenmann-Matthies and Knecht (2011) surveyed 257 Swiss elementary school teachers. Both studies reported common themes describing curriculum-based motivators for going on an outdoor field experience including (a) connecting with curriculum, (b) providing unique learning experiences, (c) promoting lifelong learners, (d) fostering interest and motivation, (e) being exposed to new experiences, (f) providing a change of setting, (g) providing enjoyment or reward, and (h) satisfying school expectations.

Teachers tend to engage in outdoor education field experiences when they have the access and opportunity to study what is neighboring the community, such as a school ground or local area that promotes and facilitates outdoor opportunities (Ross, Nicol, & Higgins, 2007). Outdoor education field experiences provide opportunities for teachers to enrich and enliven core subject-based curriculum, such as science, English, social studies, and math, in ways that are unique from formal classroom learning. Having the opportunity to experience the outdoors in a natural setting allows students to participate in hands-on learning and therefore deepens the entire experience (Blanchet-Cohen & Elliot, 2011; Eick, 2012; Kisiel, 2005; Lindenmann-Matthies & Knecht, 2011; Ross et al., 2007; Tal et al., 2014; Waite, 2011). In general, participation in and exploration of natural environments (e.g., woods, country parks, rivers, ponds, and marshes) is viewed as being more suitable than urbanized natural environments (e.g., city parks, sports fields) for teaching natural or ecological subjects and concepts.

**Experiential learning.** Outdoor education field experiences often provide students with an opportunity to demonstrate their skills and abilities in ways they might not otherwise be able in a traditional classroom (Fagerstam, 2014). Such experiences allow students to expand on the knowledge they have learned in the classroom with application directly in an outdoor setting (Kisiel, 2005; O'Brien, 2009). In this way, while teaching outdoors, teachers can provide students assistance and instruction in less obvious and more discrete ways than in the confined space of the classroom. Therefore, outdoor education field experiences may facilitate openness to topics and better foster the student–teacher relationship. Additionally, researchers contend that outdoor education field experiences may influence students' interest in school work and make

it more engaging and enjoyable for students of all ages (Fagerstam, 2014; Knight, 2011; O'Brien, 2009).

**Supportive and relaxed environment.** A supportive environment is more likely to be created when teachers and students are engaged in a natural setting than in a traditional indoor classroom. Exposure to nature's classroom allows students to ask inquisitive and reflective questions, again promoting a special student-teacher bond (Blanchet-Cohen & Elliot, 2011; Knight, 2011). Further, it is common for teachers to divide a larger class into smaller groups while on field experiences, which encourages students' social, language, and communication skills (O'Brien, 2009). In this relaxed, interpersonal environment, students who tend to be "shy" engage more frequently and in more depth (Fagerstam, 2014). As a result of this relaxed environment, more peaceful interactions and less conflict are reported, as students have greater personal space, feel less crowded, and are less inclined to claim ownership over objects (Blanchet-Cohen & Elliot, 2011; Tal et al., 2014). The calm of nature's classroom further supports children's imaginative play and the development of healthy relationships, and nature's classroom becomes a place of positive learning for childhood education (Dowdell, Gray, & Malone, 2011).

**Enhanced autonomy and leadership.** Outdoor education field experiences have been shown to promote positive feelings, a sense of calm, serenity, awe, and wonder in the environment. Outdoor learning opportunities engage all the senses, inspire natural curiosity, entice the child's imagination, and promote leadership and independence (Louv, 2008). The literature confirms that cooperative play through outdoor learning further promotes the development of student leadership skills (Blanchet-Cohen & Elliot, 2011). Tal et al. (2014) support the leadership-related benefit of outdoor education field experiences, proposing that such experiences enhance students' independent decision making, which is not always possible in a controlled classroom environment. In addition to students, teachers also have the chance to embrace new and greater leadership roles and to engage students in novel and sometimes even challenging situations (Knight, 2011).

**Increased self-esteem.** Outdoor education field experiences have been shown to reinforce inclusion through small group activities, group work, and interdependence. The experience of social inclusion at school has been directly related to increased self-esteem and self-confidence beyond the school environment (O'Brien, 2009). Of importance, increased self-esteem also encourages increased physical activity and healthy eating habits in students (Knight, 2011; O'Brien, 2009). As demonstrated in this example, a teacher specifically observed the self-confidence benefits of students in outdoor education field experiences. This example is one of many of the positive benefits that teachers observe while educating in nature's classroom:

In the beginning, the children stumbled over branches and had difficulty walking all the way to the forest. We even had to take a bus at one point. With time they got used to walking and confidence increased. We now walk the whole way, 50 minutes in total. (Lindemann-Matthies & Knecht, 2011, p. 161).

## **Barriers in Planning and Implementing Field Experiences Deter Teacher Motivation**

The majority of barriers to outdoor education field experiences relate to logistical and institutional challenges. Broadly, the challenges include access to natural and safe environments, administrative processes required to plan field experiences, and teacher knowledge and comfort.

**Perceived risk.** Often, the perceived risk of natural environments is much greater than the actual risk surrounding safety. However, parents often report being concerned for their child's safety and want confirmation of the value of being outdoors for their child's development. In this way, many teachers struggle with the balance of perceived risk and safety (Blanchet-Cohen & Elliot, 2011). Regulations and policies may further amplify parental fear about their child's

participation in outdoor education field experiences (Blanchet-Cohen & Elliot, 2011; Carrier, Tugurian, & Thomson, 2013; Ernst, 2007). In response, teachers often fear the legal consequences of a student's safety being threatened and face the challenge of justifying to parents and guardians why students are invited to participate in outdoor learning, both of which can be strong deterrents for engagement (Ross et al., 2007).

**Administrative details.** Ultimately, a teacher's dedication to planning, implementation, and postreflection dictates the positive or negative effect of an outdoor field experience (Behrendt & Franklin, 2014). Teachers who feel constrained by time and administrative demands are most likely to forgo outdoor education field experiences and, instead, to choose traditional indoor methods (Carrier et al., 2013). Safety and risk assessment also creates logistical tasks and paperwork that require approval from school administration. Therefore, risk and documentation may not necessarily prevent teachers from choosing outdoor learning field experiences, but can pose additional duties and risk management concerns upon teachers (Anderson, Kisiel, & Storksdieck, 2006; Ross et al., 2007).

**Financial concerns.** The financial cost of outdoor learning, especially travel to or from distant or rural areas, has been identified as a strong barrier to teachers including such experiences in the curriculum. Costs associated with outdoor education involve transportation to and from learning sites, program facilitation (e.g., trained guides), and other fees for experiential programs. When a school does not have a budget for outdoor field experiences, the financial burden is passed on to parents and creates further barriers to inclusion (Ernst, 2007; Ross et al., 2007).

Transportation poses a substantial financial cost and may be viewed as an additional administrative task for teachers and staff, who must book buses and gain access to field sites. Larger groups may require additional buses, each operated by a professional driver with a specialized license, which also contributes to increased costs of the outdoor education field experience. Of importance, Stern et al. (2012) described that although teachers often report financial barriers to participation, administrators do not see these financial barriers as insurmountable. This anchors the need for further investigation of teacher and administrator perceptions of implementing outdoor education field experiences and for finding common ground from which to build opportunities for students who may otherwise be unable to bear these costs.

**Teacher knowledge and experience.** Another significant barrier for teacher selection of outdoor learning field experiences is a perceived lack of knowledge and confidence to teach outdoors. Tan and Pedretti (2010) and Ernst (2007) suggested that a key deterrent for selecting field experiences is the lack of formal training *in* and *about* outdoor environments. In addition to added safety risks, teachers are often afraid of losing their "expert" status while on outdoor field experiences where they may be unable to respond effectively to issues arising or student questions. Stern et al. (2012) explored teacher motivations to participate in outdoor environments and found that teachers were most influenced by their ability to match course material to the outdoor location and by the impact of park programs on student success. Rebar (2012) and Moseley, Huss, and Utley (2010) also reported on the importance of teacher training for field experiences, providing several strategies to enhance teachers' outdoor knowledge and skill base.

Teachers and students are often colearners about the field site during outdoor education field experiences (Graham, 2013). This shared role can be viewed as a benefit to the teacher and student. Glackin (2016) supported this conclusion and found that teacher selection of outdoor education field experiences was pronounced for those who valued what she coined "authentic science opportunities," whereas those who valued the outdoors simply for leisure and recreation typically chose traditional indoor learning experiences.

**Teacher values and motivation.** Kisiel (2005) and Rebar (2012) affirmed that a teacher's background and attitudes are strong predictors in the decision-making process of whether to choose outdoor education field experiences. Personal values associated with the outdoors, including freedom and fun, ownership and autonomy, authenticity, love of rich sensory environments,

and physicality in pedagogical practice have been reported to influence teacher decision making (Waite, 2011). Intrinsic motivation has been found to strongly compel teachers to address the barriers and still choose outdoor education field experiences despite the challenges (Fagerstam, 2014).

**Curriculum disturbances.** In some cases, field experiences are disruptive to scheduled lesson plans, as well as to familiar patterns and structures (Graham, 2013). Fagerstam (2014) found that the initial behavior challenges reported in early transition from indoor to outdoor learning stabilized after 3 months, which ultimately resulted in overall classroom management benefits. In contrast, others observed that student behavior was more disruptive in indoor settings and more attentive outdoors (Graham, 2013; Lindenmann-Matthies & Knecht, 2011). Researchers have speculated that positive behavioral change relates to less structure and less reactive teachers in expansive outdoor spaces (Blanchet-Cohen & Elliot, 2011; Lindenmann-Matthies & Knecht, 2011). In one study, a teacher shared her experiences:

Children are more concentrated in the forest, not in terms of being silent, but in terms of longer attention spans. They immerse in something, for instance a game. When we observed squirrels, everybody—even the most boisterous boys were completely quiet, I have a feeling that the children are more themselves. And they listen well to what I say, and remember well what I have told them. (Lindenmann-Matthies & Knecht, 2011, p. 160).

**Facilitation and volunteer support.** Teachers often need practical help with supervision and facilitation during outdoor field experiences. Qualified and confident volunteers, however, are not readily available or willing to join in nature's classroom. A lack of volunteer support influences teacher decision making (Ernst, 2007; Ross et al., 2007). Lockstone-Binney, Holmes, Smith, and Baum (2010) support this notion; however, not much research has explored the volunteer experience. Caissie and Halpenny (2003) found that volunteers who enjoy outdoor experiences are more likely to support teachers in outdoor education activities. They also found that volunteers want to know the effect of their efforts and that their labor is valued and consequential (Caissie & Halpenny, 2003). This reinforces other researchers' claims that teachers would be wise to share results with their volunteers to add to the motivation of volunteers to participate.

## Discussion

Teachers are responsible for balancing the potential risks, administrative logistics, and coordinated efforts required for planning with the many benefits related to student physical, emotional, and social health; enhanced educational experience; and greater environmental awareness. Unfortunately, with the increased pressures of academic accountability on teachers and the trickling down of curriculum, often combined with many barriers, teachers are often hard-pressed to plan and implement outdoor education experiences.

Knowledge of and comfort in the outdoors is a prominent yet understudied feature of motivation for teachers to engage their students in outdoor field experiences. Anderson et al.'s (2006) study of teacher perspectives from three countries is mirrored in this study. When teachers are more informed about the outdoors, they are increasingly willing to share that knowledge, spark student curiosity, and ideally translate their passion to the students. Davis (2009) argued that a gap in teacher knowledge and planning results in a diminished value of time spent outdoors. Direct experiences of the outdoors have been found to be valuable, and in some cases essential, for learning and for personal and social development for those of all ages (Ross et al., 2007).

Teachers' curricular choices often reflect personal experiences, values, and belief systems. As such, a better understanding of teachers' experiences and long-standing perceptions of such experiences (both positive and negative) could further clarify this phenomenon. Teachers who value and hold a personal interest in the outdoors are more motivated to share the experience

with students; hence, barriers such as travel and funding are more likely to be viewed as minor problems (Ernst, 2007). Some teachers may use the existence of barriers as a means of avoiding outdoor activities (Ernst, 2007; Higgins, Nicol, & Ross, 2006).

This review concludes that personal interest and value alignment with or against outdoor experiences strongly influence teacher decision making toward outdoor education field experiences. Given the growing appreciation for student benefits of outdoor experiences (Becker et al., 2017), fostering teacher motivation is critical for these important gains to be reaped. At the opposite end of the spectrum, a lack of knowledge, comfort, or interest in natural surroundings has thwarted teacher engagement in outdoor activities (Davis, 2009).

Past findings are valuable in building a foundational understanding of teacher experiences of outdoor education field experiences. Although the findings of this review identify teacher motivators and barriers to participation in outdoor education field experiences, the relative influence of outdoor education on definitive student health and performance outcomes is not identifiable with a review of this nature. This narrative review also has several limitations. Many of the reviewed studies employed qualitative inquiry and did not use formal outcome measures, which limits the ability to synthesize and generalize findings. With respect to the importance of qualitative and quantitative methodologies, future intervention studies need to use mixed methods approaches. Caution should also be exercised in generalizing the results of this review to higher education environments, as the bulk of the literature explores early childhood and elementary experiences. These narrative findings are important for framing future research endeavors such as systematic reviews, meta-analyses, or mixed methods intervention studies.

In addition, research from multiple perspectives including teachers, administrators, volunteers, program leaders, and program participants may provide a more comprehensive understanding of the factors influencing outdoor education experiences. Most of the research focuses on teacher motivations and neglects to provide insight into other key understandings of the actors involved in implementing outdoor education. Specifically, future research needs to address the role of volunteers in outdoor education field experiences, with the goal to reduce the effect of this barrier. Risk management factors may also directly influence whether a volunteer wants to partake in outdoor education field experiences, and these factors may need to be further explored.

## Conclusion

This narrative review further explores nature's classroom and provides a point of entry for future study that is timely and important. Outdoor experiences offer a unique interaction with the environment, engaging all five senses, and often providing a calming, authentic experience for students and teachers. This narrative review sheds light on the motivators and deterrents that teachers experience while considering and implementing outdoor education activities. The literature suggests a clear need for better understanding, both empirically and theoretically, of the decision-making process that teachers undertake in regard to engagement in outdoor education activities. Considering the known benefits related to outdoor education, the authors acknowledge concerns for safety and further emphasize the vitality of promoting outdoor education field experiences for children and adolescents. This narrative review concludes with a quote by Dowdell et al. (2011), who suggest that "to develop a love of the environment children require frequent positive experiences with nature and an adult who shares their interest in the environment" (p. 26).

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