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# Exploring an unfamiliar territory: a study on outdoor education in Lebanon

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## ABSTRACT

This paper aims to present findings from a doctoral study on the under-explored practice of outdoor education in the Middle Eastern country of Lebanon. I first propose a working definition for outdoor education before introducing the study's findings that sought the perspectives of 30 Lebanese public and private primary school educators toward outdoor education and its integration in their teaching practice. Several perceived outdoor education benefits emerged from the participants' narratives, including the promotion of the children's emotional wellbeing, creativity, and motivation to learn. They also suggested many implementation challenges related to safety concerns, covering the concentrated curriculum, securing necessary funding, and weather conditions. Furthermore, the educators offered various ideas to integrate outdoor education in teaching languages, sciences, and social studies as well as in addressing environmental issues. I later discuss the findings and propose a set of recommendations to support the provision of enhanced outdoor education experiences.

## KEYWORDS

Outdoor education;  
environmental education;  
advantages; implementation  
challenges; Lebanon

## Introduction

Using outdoor settings as learning media is not a new practice. The literature suggests that outdoor education has a long history in different settings across the globe, including the Scandinavian context (Williams-Sieghfredsen, 2005), the UK (Rickinson et al., 2004), Australia (Polley & Pill, 2015), New Zealand (Cosgriff, 2008), and Canada (Purc-Stephenson, Rawleigh, Kemp, & Asfeldt, 2019), to name a few.

Outdoor learning<sup>1</sup> could be implemented to address different curriculum expectations (e.g. Finn, Yan, & McInnis, 2018; Marchant et al., 2019; Palavan, Cicek, & Atabay, 2016; Rickinson et al., 2004). In addition, it has been suggested that taking part in outdoor education activities, especially in natural settings, can enhance the students' physical skills, mental, and/or emotional wellbeing (e.g. Dillon et al., 2005; Heras, Medir, & Salazar, 2020; Mygind, 2007; Richardson & Murray, 2016; Yildirim & Akamca, 2017) as well as their social and collaborative skills (e.g. Becker, Lauterbach, Spengler, Dettweiler, & Mess, 2017; Richardson & Simmons, 1996; Richmond, Sibthorp, Gookin, Annarella, & Ferri, 2018). It could also help them develop a better understanding of the natural environment (e.g. Ballouard, Provost, Barré, & Bonnet, 2012; Becker et al., 2017; Marchant et al., 2019; Purc-Stephenson et al., 2019) and a positive attitude towards it (Dillon et al., 2005; Rickinson et al., 2004; Turtle, Convery, & Convery, 2015). On top of that, the COVID-19 pandemic has drawn further attention to education in outdoor settings where children can learn through hands-on experience while breathing fresh air and maintaining a safe physical distance to mitigate the spread of the virus (University of Colorado, 2020; Xing, 2020).

Despite the numerous benefits of outdoor education and its widespread implementation across different global settings, little is known about the outdoor education practice in the Middle Eastern context of Lebanon. In this paper, I report findings of my doctoral research project that aimed to explore the perceptions and attitudes of Lebanese school educators toward outdoor education and its integration in their teaching practice (Dabaja, 2020). I start by proposing a working definition for outdoor education. Then, I present what the participant educators suggested in terms of their description of outdoor education, its perceived benefits and implementation challenges as well as the possibilities for its integration in their practice, including the teaching of environmental related matters. I conclude by proposing a set of recommendations for research and practice.

## Literature review

### *Outdoor education: traits, benefits, and a working definition*

Priest (1986) defined outdoor education as ‘an experiential process of learning by doing, which takes place primarily through exposure to the out-of-doors. In outdoor education, the emphasis for the subject of learning is placed on RELATIONSHIPS, relationships concerning people and natural resources’ (p. 13, emphasis in original text). For Richardson and Simmons (1996), ‘[o]utdoor education addresses learning objectives through guided direct experience in the outdoors, using the natural and built environments as resource materials’ (p. 4).

Rickinson et al. (2004) viewed the concept of outdoor learning as ‘broad and complex [...] and it] touches on a wide range of educational activities in many different settings’ (p. 15). In their extensive review of literature, the latter authors drew distinctions between three main kinds of outdoor learning activities: fieldwork and outdoor visits, outdoor adventure education, and school grounds and community-based projects (for more details, please see Rickinson et al., 2004). While Rickinson et al. (2004) excluded activities conducted in what they referred to as *indoor settings*, such as museums and zoos, for many reasons, other literature included these indoor settings when portraying outdoor education. For instance, in a German context, Sahrakhiz, Harring, and Witte (2018) communicated that outdoor school activities can take place in natural environments (e.g. forests, parks, riverside), in cultural and urban places (e.g. museums, factories, and libraries), and/or on school grounds outside the school building. Also, findings from the Turkish study by Palavan et al. (2016) showed that outdoor education sites can encompass, beside outdoor natural settings, out-of-school indoor settings, such as museums, supermarkets, factories, and governmental institutions.

Still, one might challenge the idea of outdoor education occurring in indoor places. To address this legitimate enquiry, I would draw on Becker et al. (2017) who underscored that ‘[a]n all-encompassing definition of outdoor education is scarcely possible due to different meanings, understandings and practices within various *research areas, countries and cultures*’ (p. 2, emphasis added). Based on their literature review, the latter authors proposed that ‘[i]n general, outdoor education can be described as teaching and/or learning and/or experiencing in an *outdoor* and/or *out-of-school* environment’ (p. 2, emphasis added) while offering some common terms for outdoor education used globally, including ‘learning outside the classroom, udeskole, friluftsliv, outdoor adventure education and forest school’ (p. 2). In fact, it appears that the interpretation of outdoor education can vary not only across contexts, but also in the same context (Cosgriff, 2008). Thus, the question that could be asked is: How can outdoor education be comprehensively defined?

Attempting to address this question, I rely on the literature to propose a working definition of this broad and complex concept. To start with, there seems to be a consensus that outdoor education promotes learning through tangible hands-on experience which aligns with the active learning or John Dewey’s learning by doing theory (Bruce & Bloch, 2012). This aspect of outdoor learning was reflected in the work of Robbins (2015) who drew upon the literature to suggest that “Outdoor Education is a branch of education that is interdisciplinary and occurs in the wilderness through direct experiences”. (p. 34). The author provided a rationale for each of the terms used in the

definition. The *direct experiences* refers to the students' learning through hands-on experiences which promotes, among others, their critical thinking and motivation. The *interdisciplinary education* alludes to the connections that outdoor education makes between different curriculum subjects, such as geography, mathematics, and language arts. The third key term in Robbin's definition is *wilderness* which represents

the added difficulties of being so far from amenities. . . . Being away from "civilization" increases the actual and perceived risk to any challenging situation. [. . . Here, s]tudents develop real life skills by working through these challenging situations [. . .], gain leadership skills, build relationships with fellow students, develop self-awareness, and gain a sense of achievement. (pp. 34-35)

Comparable to Robbins' (2015) demarcating aspects of outdoor education, the review of literature that I conducted revealed that engaging in direct outdoor education activities could help improve the students' knowledge about (a) different curriculum subjects, including social studies, language arts, mathematics, and/or sciences (e.g. Avci & Gümüş, 2020; Becker et al., 2017; Finn et al., 2018; Grant, 2017; Harris, 2017; Palavan et al., 2016; Robbins, 2015), and (b) the natural environment (e.g. Ballouard et al., 2012; Becker et al., 2017; Marchant et al., 2019; Purc-Stephenson et al., 2019). Also, these activities were suggested to have enhanced the students' physical skills and mental health (e.g. Dillon et al., 2005; Finn et al., 2018; Heras et al., 2020; Marchant et al., 2019; Rickinson et al., 2004; Yildirim & Akamca, 2017) as well as their social and collaborative skills (e.g. Becker et al., 2017; Richardson & Simmons, 1996; Waite, Bølling, & Bentsen, 2016). It is noteworthy that most of these reported positive outcomes were the result of engaging in outdoor nature-based education activities.

Thus, I concur with Robbins (2015) depiction of outdoor education in terms of being *interdisciplinary* and occurs through *direct experiences*. However, I draw on the reviewed literature to suggest that the outdoor education activities could encompass those performed not only in the *wilderness*, away from civilization (e.g. in a mountain setting; Hawxwell, O'Shaughnessy, Russell, & Shortt, 2019), but also in places with or near amenities, such as school grounds (e.g. Hawxwell et al., 2019; Rickinson et al., 2004; Sahrakhiz et al., 2018).

To conclude, I propose that

*Outdoor Education is a branch of education that occurs in nearby or remote outdoor and/or out-of-school settings, be they natural or man-made, where students are provided opportunities to engage in a multitude of learning activities. Outdoor Education could help improve not only the learners' curriculum and environmental-related knowledge, but also their personal/interpersonal skills and overall wellbeing through active involvement and direct hands-on experiences.*

### **Educators' perceptions toward outdoor education in the literature**

In this subsection, I briefly draw on relevant literature to introduce the perspectives of educators from different contexts toward the implementation of outdoor education.

In a Canadian context, Gillis (2016) conducted a qualitative study to explore the viewpoints of four teachers, one administrator, and an outdoor educator toward the implementation of a newly developed school-based outdoor environmental education program. Findings from the interviews showcased an overall success in the implementation of the program 'both in terms of increased opportunities for students to use the outdoor learning facility and the clear benefits to teacher and student learning' (p. 139). One key factor that contributed to the success of the program was the employment of an outdoor educator who helped classroom teachers in designing and facilitating outdoor education activities. Other success factors consisted of the internal support from the school principal added to community partnerships with the neighbouring university and various local organizations.

A second relevant study was conducted by Marchant et al. (2019) in South Wales, UK that aimed to explore the experiences and perceptions of three head teachers, 10 teachers, and 10 pupils from three primary schools toward the implementation of an outdoor learning program for students aged

9 to 11 years. Data were collected through interviews and a focus group at the beginning of the programme and six months into its implementation. Beside the benefits related to 'pupils' engagement with learning, concentration and behaviour, as well as positive impacts on health and well-being and teachers' job satisfaction' (p. 1), the participants' narratives revealed several challenges that could influence the implementation of the outdoor learning program. These challenges pertained to achieving curriculum expectations and accountability, safety concerns, the financial cost, the stakeholders' support (e.g. the school staff, parents, and school governors), and the teacher's confidence to facilitate outdoor learning.

Furthermore, in the Middle Eastern context of Turkey, a neighbouring country to Lebanon, Palavan et al. (2016) qualitatively explored the viewpoints of 18 elementary school teachers (i.e. from grade 1 to 4) toward outdoor education and its implementation. Study outcomes revealed that, despite the participants' lack of accurate knowledge on outdoor education, many of them reported either implementing it or witnessing its implementation by other educators. According to the Turkish educators, outdoor education activities can occur in natural sites, museums, supermarkets, factories, and governmental institutions to teach curriculum-related subjects, such as English, mathematics, geography, and social studies. Further findings showcased a set of perceived implementation challenges, such as managing a large number of students outside the classroom, securing transportation to the site, obtaining permissions from different stakeholders, and covering the curriculum expectations.

### ***The study context: Lebanon and outdoor education***

Lebanon is a country that is situated in southwestern Asia, on the Mediterranean Sea, and represents a part of the Middle East region. It has an area of 10,452 square kilometres and an estimated population of about 7 million (Britannica, 2021). Lebanon has been experiencing several problems on many levels, especially after the outbreak of the civil war in 1975 (Reuters, 2020).

In terms of the Lebanese pre-university school system, Skaf and Habib (2008) portrayed it as

[...] centralized, with all educational institutes in the public sector regulated by the Ministry of Education and Higher Education in Beirut [MEHE]. [...] Private schools, on the other hand, have their own organization. In regard to educational decisions, however, these schools are still subject to the authority of the ministry (p. 355).

Both public and private schools in Lebanon employ the Lebanese curriculum except for some private schools that are licensed to teach non-Lebanese curricula (i.e. the French, American, and International Baccalaureate systems) (MEHE, n.d.).

Palavan et al. (2016) highlighted both the newness of outdoor education and the scarcity of relevant resources in Turkey. This echoes the situation in Lebanon. In fact, it seems that outdoor education is not only scarcely studied in Lebanon, but also rarely integrated in the schools' ongoing practices. The American Community School (ACS) in Beirut represents one of the few institutions where outdoor education is implemented on a regular basis. This private school has an outdoor educational centre in a pine wood in Mount Lebanon region (about 40 Km from Beirut) that the students visit regularly. According to their website, the outdoor education program is an extension of the school's program. It is underpinned by the positive impact of this educational concept on the students' mental and physical wellbeing and its potential to promote their connection with nature and their understating of the multiple challenges facing the natural environment (ACS, n.d.).

The ACS appears to be a pioneer in the Lebanese context in terms of making outdoor education a part of their teaching program. However, a quick look at the school's admission webpage shows that their tuition and fees, for the 2021–22 academic year, range from about \$14,000 US for Nursery and KG1 to almost \$20,000 for grades 11 and 12 (see [acs.edu.lb](https://acs.edu.lb)) in a country where the 2019 GDP per capita was the equivalent of \$7500 (World Bank, n.d.). This suggests that students who attend this institution and benefit from the outdoor education program mainly come from a high socio-economic population.

As for the relevant literature in Lebanon, the review that I conducted yielded resources on environmental education solely. One of these resources was the *National Environmental Education Strategy* (NEES) which was directed by the MEHE. The NEES encompasses a set of environmental education guidelines that aim to prepare Lebanese citizens who are well-informed about the environment, cognizant of the required steps to preserve it, and aware of their environmental responsibilities on the personal, social, national, and humanitarian levels (The Center for Educational Research and Development [CERD] & The Association for Forests, Development and Conservation [AFDC], 2012). The NEES stressed the importance of developing specific environmental education curricula to integrate these issues in the teaching of different subjects. To this end, the AFDC and CERD have designed and issued, within the framework of the NEES, two environmental education curricula: one for grades 1 to 3 and the other for grades 4 to 6 (AFDC & CERD, 2012, 2014). In practice, the environmental education curricula propose a teaching strategy that combines classroom activities and *fieldwork and outdoor visits during school hours*.

Another located resource was Kezaride (2015) who aimed to examine the environmental views and attitudes of Lebanese secondary school students. Kezaride concluded that '[t]he challenges that Lebanon faces seem to provide impetus for students to be concerned and increases [*sic*] their desire to improve their environment, even if their knowledge and skills are lacking' (p. 61).

In the same context, Ghosn-Chelala and Akar (2021) investigated education practices for environmental sustainability in Lebanon by interviewing 51 public school teachers during 2016. Findings showed that the teachers' overall understanding of environmental sustainability was short-sighted. Furthermore, the participant teachers stressed that sustainable practice must begin at home or in society and goes hand-in-hand with the cessation of conflicts and corruption.

The only retrieved Lebanese study on environmental education that included an outdoor component was conducted by Bouzeineddine (2012). It consisted of examining the impact of implementing an environmental intervention for grade 10 students attending a middle-class private school that is situated in a mountainous Lebanese region surrounded by pine trees. The educational intervention focused on Lebanon's forests, specifically pine forests, and was implemented in formal and non formal contexts over four months. Although the outdoor activities in which students were involved were not clearly described, Bouzeineddine (2012) highlighted that outdoor field trip activities were intended to help students enrich their knowledge about the current state of Lebanon's forests and develop their communication, interpersonal, and problem-solving skills. Study outcomes showed that participant educators were favourable to integrating environmental education in school curricula while reporting the students' improved understanding of forestry environment during the outdoor field trips.

## The research methodology

A mixed methods multisite case study design was implemented (Sharp et al., 2012) to address the overall aim of the research project. In this study design, researchers collect, analyse, and integrate qualitative and quantitative data to provide an in-depth understanding of a case or multiple cases (Creswell & Plano Clarke, 2018). For the purpose of this paper, I introduce a part of the study findings that emerged from the qualitative thematic analysis of the participants' narratives. Thematic analysis 'involves the searching *across* a data set—be that a number of interviews or focus groups, or a range of texts—to find repeated patterns of meaning' (Braun & Clarke, 2006, p. 86). More specifically, an inductive—data-driven—thematic analysis was implemented to code the qualitative data.

## The two research sites

A purposeful sampling technique was implemented to identify rural schools and recruit participants who were in-service elementary public and private school educators and willing to take part in the study (Palinkas et al., 2015). Both recruited schools were located in the same Lebanese countryside

area at about two kilometres from each other. The geographical proximity of the two sites would mean that educators from both schools can have access to almost the same local outdoor settings (i.e. natural or man-made) that are affected by identical weather elements all year long.

The public school encompassed about 1000 students during both morning and afternoon shifts for the 2019–2020 school year. The private elementary school had a total of 900 enrolled students for the same school year. The public school students did not have to pay any tuition or registration fees and books were provided for free. In turn, students at the private school paid registration fees and bought their own books and other needed pedagogical materials which brought the total amount to the equivalent of \$800 US per year. These figures suggest that students in this private school most probably came from low middle-income families (the GDP per capita in Lebanon was about \$7500/year in 2019; World Bank, [n.d.](#)).

### The participants

All educators from the elementary private and the public schools were invited to participate in the study. A total of 20 envelopes containing the research questionnaires and information/consent letters were left at the secretary office of each school (I informed the schools that further questionnaires can be provided if more educators wanted to participate in the study). Out of the 40 distributed envelopes (20 in each school), I received 32 envelopes; 28 of them contained completed questionnaires, i.e. 17 public school educators (PU) and 11 private school educators (PR). The remaining 4 envelopes had empty questionnaires. In addition, both school principals were individually interviewed. Thus, a total of 30 educators took part in the study. [Table 1](#) illustrates the breakdown of the participants per subject and duration of professional experience. I would like to mention that in the Lebanese school system, educators, especially at the primary level, can be assigned to teach multiple subjects.

In terms of ethical considerations, the recruited participants had the choice to withdraw their data two school days after data collection (i.e. the questionnaire and the individual interview). No withdrawal clarifications were required. Furthermore, the schools' names were not disclosed and an alpha numeric code was assigned for each participant educator to assure their anonymity. The study received a clearance from the Research Ethic Board of the University of Windsor and the approval of the MEHE.

### The data collection

The research procedure was replicated at both research sites which allowed me to analyze and compare/contrast the educators' perspectives within each case and across cases. The data collection took place between February 20<sup>th</sup> and April 13<sup>th</sup>, 2020. It is noteworthy that on February 29<sup>th</sup>,

**Table 1.** An overview of the participants' assigned subjects and years of experience in the education field.

| The subject matter                                 | Number of PR<br>(N = 11)            | Number of PU<br>(N = 17) | Years of<br>Experience | Number of PR<br>(N = 11) | Number of PU<br>(N = 17) |
|----------------------------------------------------|-------------------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| Foreign languages (i.e. French or English)         | 4                                   | 5                        | 1 to 5 years           | 4                        | 7                        |
| Arabic language                                    | 1                                   | 4                        | 6 to 10 years          | 3                        | 2                        |
| Science (i.e. biology, chemistry, and/or physics)  | 3                                   | 6                        | 11 to 15 years         | 1                        | 1                        |
| Mathematics                                        | 3                                   | 6                        | 16 to 20 years         | 1                        | 5                        |
| Social Studies (history, geography, and/or civics) | N/A                                 | 4                        | Over 20 years          | 2                        | 2                        |
| Other                                              | 1 IT instructor<br>1 vice-principal |                          |                        |                          |                          |

2020, the Lebanese Minister of Education and Higher Education announced the closure of schools all over the country as a precautionary measure to help prevent the spread of COVID-19 (Naoufal, 2020).

The questionnaire consisted of 13 items: nine open-ended questions; one 5-point scale item; and three questions that sought the grades, the subjects, and the duration of the participants' professional experiences. The open-ended question aimed to explore (a) the participants' outdoor experiences as children, students, and educators; (b) the ways they define outdoor education; (c) the possibilities of integrating this educational form in the teaching of their curriculum subjects and in addressing the NEES guidelines; (d) the importance of the teacher-administration collaboration for the facilitation of outdoor education; and (e) the perceived advantages, drawbacks, and implementation challenges of outdoor education. An additional open-ended question offered the participants the chance to share further thoughts or suggestions. Moreover, one 5-point scale item examined how educators would rate the benefit of outdoor education (i.e. from *not at all beneficial* to *extremely beneficial*). Finally, the questionnaire encompassed an item that asked participants if they were interested to participate in a focus group interview. However, due to several barriers mainly caused by the spread of COVID-19, this phase of the original study design was modified and individual semi-structured interviews with both school principals were conducted.

In terms of the individual semi-structured interview, a set of comparable questions to those in the individual questionnaire were asked. These interviews aimed to capitalize on the expertise and experience of the school leaders toward outdoor education and its integration in the school teaching practice.

Data were collected in Arabic language (i.e. the mother tongue of the participants) and then translated into English.

## The research findings

In this section, I introduce findings related to the participants' perspectives vis-à-vis (1) their definition of outdoor education, (2) the integration of outdoor education into the teaching of different curriculum subjects and environmental issues, and (3) their perceived advantages and implementation challenges of this educational approach.

### Defining outdoor education

Both groups of educators suggested that outdoor education takes place outside the limited space and strict rules of the traditional classroom. They proposed that outdoor education activities could be fun, challenging, and/or adventurous, with the aim of reinforcing the educational concepts taught in the classroom by engaging students in concrete hands-on activities. As for the types of settings, the participants reported that outdoor education activities could occur in different places, such as a school playground, a park, wild natural environments, a waste management facility, or a city hall.

### Integrating outdoor education in the curriculum

Although most of the study participants showed a positive attitude toward outdoor education, only 13 of them (7 PR and 6 PU) reported engaging their students in outdoor education activities. These educational activities appeared to have taken place sporadically.

In terms of integrating outdoor education in the teaching practice, language instructors suggested that visiting natural outdoor places can inspire students to develop their expressive abilities (i.e. verbal and writing skills). A music lesson could be conducted outdoors through listening to nature sounds (e.g. chirping birds and rustling leaves) as suggested by one PU who has a major in

music. Moreover, most science teachers have proposed that outdoor education can be conducive to enhancing the students' understanding of the local ecosystem, including plants and animals, as well as topics related to food, nutrients, and healthy diet by using outdoor-grown fruits and vegetables.

As for the ideas proposed to integrate outdoor education in teaching social studies, participants indicated that a lesson in geography about water resources could be conducted on riverbanks, a field trip to archaeological sites could be organized to learn about relevant historical events, and a civics lesson about governmental services could occur through visiting the local municipality. In terms of mathematics, there were opinions suggesting that outdoor education was either not necessary or difficult to incorporate into teaching this subject. One PR thought that 'it is hard to integrate math lessons in outdoor education' (PR9), while a PU believed that 'in [teaching] mathematics, there is no need for outdoor education' (PU8). A comparable viewpoint was advanced by the public school principal.

### ***Teaching environmental issues through outdoor education***

Other aspects of the study findings pertained to the way participants linked outdoor education to the objectives of the NEES. In fact, some of them considered these two fields are closely related. The private school vice-principal, for instance, communicated that enhancing the students' 'environmental awareness can't be separated from outdoor education,' and added,

how can we learn to maintain the cleanliness of the soil and avoid polluting water if students do not learn how to collect trash and sort it correctly, as well as how to plant flowers and trees to purify the air? (PR7).

Furthermore, one PU teacher suggested that 'spending an extended time in nature could help reinforce the connection between the child and nature. The greater this bond is, the stronger is the pursuit to conserve nature and find solutions for the environmental problems'. (PU10).

In addition, the participants presented different ideas through which outdoor education activities could be implemented to address environmental issues. These activities included cleaning the seashores, visiting a waste management facility, finding ways to recycle discarded waste, and planting trees. It was notable that all these ideas for outdoor education activities related to environmental education were merely proposals as none of the participants reported implementing any of them.

### ***The perceived benefits of outdoor education***

The most frequently cited beneficial impact of outdoor education was the promotion of the children's mental and emotional wellbeing by making them feel at ease, comfortable, relaxed, with a clearer mind which is, as one PU proposed, 'a decisive factor for [students'] learning' (PU1). Furthermore, it was suggested that outdoor education could help break the boring routine of the conventional classroom pedagogy and enable students to engage in a lively atmosphere while promoting their creativity. In the outdoor settings, students could become motivated and keener to learn in a concrete and tangible way where 'they get to see and touch what they are learning [about]' (PR11), and therefore, 'using [their] multiple senses while discovering and reasoning until they reach the desired educational goal' (PU4). The participants also proposed that engaging in outdoor education activities can promote the students' collaborative skills and strengthen their relationships with teachers.

### ***The perceived implementation challenges of outdoor education***

Among the key emerging themes from this question was the barrier pertaining to managing children in the new setting, especially when dealing with a large number of students. One PR reported a potential difficulty to supervise more than 20 students, while a PU thought that it becomes challenging to go outside if the number of children is over 15. Having difficulties managing students in outdoor settings was linked to the probable occurrence of accidents as one PU communicated,

'some students might not stick to the required rules of conduct or other related rules to ensure their safety' (PU12). In fact, many participants proposed that accidents (e.g. getting injured or having allergic reaction) can happen when outdoors and therefore, showed concerns related to the children's safety.

Beside their risk perceptions associated with outdoor activities, participants viewed the lack of seriousness and concentration of some students 'due to the many things that might catch their attention outdoors' (PU4) as another implementation barrier.

Covering curriculum expectations represented an additional implementation challenge because 'the national curricula don't align with outdoor education as these curricula are significantly concentrated' (PR10) and/or 'outdoor education is not included in the curriculum' (PU5). Relatedly, the lack of time was proposed by many educators as a supplemental challenge to implement outdoor education. This time constraint was mainly related to covering the heavily concentrated curriculum as well as planning and facilitating the outdoor education sessions, including the time required to take students to the site.

Furthermore, several educators, including both school principals, suggested that weather conditions (e.g. low temperatures) can represent a serious obstacle to conducting outdoor sessions. Other challenges were those related to getting the support of different stakeholders, such as parents and administrations, as well as the need to have trained educators to effectively facilitate these sessions. Finally, acquiring necessary funds to conduct outdoor sessions, finding an appropriate place for these sessions, and securing transportation to travel back and forth to this place were suggested as additional challenges to perform outdoor activities.

## Discussion and Conclusion

In this section, I recapitulate the study's findings and discuss them in light of the existing literature. Then, I propose a set of recommendations related to research and practice.

### *The traits of outdoor education*

The portrayal of outdoor education by the Lebanese educators mirrors what is found in the literature, especially when it comes to learning through hands-on tangible experiences that could promote the students' creativity and motivation (Becker et al., 2017; Rickinson et al., 2004). As for the outdoor settings, the educators' narratives revealed that both nearby and remote natural settings represented the most mentioned places to teach curriculum subjects. This outcome coincides with pertinent literature on outdoor learning where natural places constituted the most cited places to facilitate outdoor activities (Hawxwell et al., 2019; Sahrakhiz et al., 2018). Yet, other settings were also suggested, such as the school playground, archeological sites, as well as indoor out-of-school places like the city hall and a waste management plant. Comparable indoor settings were mentioned in the Middle Eastern Turkish-based study on outdoor education conducted by Palavan et al. (2016).

### *Teaching curriculum subjects through outdoor education*

Lebanese participants proposed that outdoor education can be integrated in the teaching of languages, sciences, and social studies which aligns with the literature (e.g. Avci & Gümüş, 2020; Becker et al., 2017; Fägerstam, 2014; Gillis, 2016; Marchant et al., 2019). One discrepancy between the study findings and the literature was related to mathematics when two teachers and one principal perceived outdoor education as either not necessary or difficult to incorporate in teaching this subject. These perspectives could be driven by various perceived barriers, including the overburdening content of the national mathematics curriculum. In fact, the participant who thought that 'in [teaching] mathematics, there is no need for outdoor education', stated that 'the Lebanese educational curriculum is highly concentrated that it would be difficult to sacrifice a classroom period to go outdoors' (PU8). The latter statements echo outcomes from the Lebanese environmental education

study by Bouzeineddine (2012) where the grade 10 mathematics educator was excluded from the research 'due to [the] rigid [mathematics] curriculum and the reluctant attitude of the teacher to change' (p. 48).

### ***Teaching environmental issues through outdoor education***

Study outcomes showed that participants perceived a symbiotic link between outdoor learning and environmental education and presented different ideas through which outdoor education activities could be implemented to address environmental issues as a part of the NEES. These activities included beach cleaning, visiting a waste management facility, finding ways to recycle discarded waste, and planting trees. It was noted, however, that all the mentioned activities consisted of proposals as none of the participants reported implementing any of them. This could be due to many possible impeding reasons, including a lack of time and necessary funding, safety concerns, and/or the overcrowded curriculum as it was the case for the integration of outdoor education in the teaching of different curriculum subjects. This interpretation is supported by the perspectives of a group of Lebanese public school teachers in Ghosn-Chelala and Akar (2021) who proposed that challenges related to curriculum and official exams, funding, and security concerns can hinder the implementation of education for environmental sustainability outside the classroom.

Yet, another potential cause for the lack of engaging in outdoor environmental activities could be linked to the Lebanese societal norms which, most often, tend to diverge from being environmentally friendly (Kezaride, 2015). This was reflected in the narratives of two participants of the present research who emphasized the paramount importance of the social and cultural aspects toward preparing environmentally friendly individuals. One of them stated, 'outdoor education could help shed light on the environmental problems, but environmental education grows with the person and their ethics, and how they were raised' (PR5), while the other suggested that 'before [taking it up in] school[s], it is important to educate the family and society first as we are illiterate in terms of environmental awareness' (PU8).

These statements mirror the accounts of Lebanese teachers in Ghosn-Chelala and Akar (2021) who 'related apathy and even "a kind of depression" among young people to the absence of adults modeling practices and priority to sustaining the natural environment' where trash is piling up in several places and 'many parents still throw garbage out of car windows' (p. 375). One of the latter teachers communicated that the environmentally friendly practice should start from the students' homes echoing the previous statements advanced by both PR5 and PU8. On this matter, the literature suggests that several factors, such as age, gender, education level, political preferences (Fagan & Huang, 2019; Pyman & Pammett, n.d.), socio-economic status (Pampel, 2014), and overall cultural contexts (Ester, Simões, & Vinken, 2004), can influence the individuals' perspectives about environmental issues. Thus, I propose that the Lebanese public attitude toward adopting less environmentally friendly practices is shaped by, among other factors, the political, economic, and humanitarian crises that this country has been facing since the eruption of the civil war in 1975 (Reuters, 2020). This interpretation coincides with Kezaride's (2015) conclusion which states that the '[p]olitical instability, socio-economic, structural and cultural challenges make focus on environmental issues challenging in Lebanon' (p. 59).

### ***The perceived benefits of outdoor education***

The study participants proposed that engaging in outdoor activities can

- help break the boring routine of the conventional classroom pedagogy while, at the same time, learning about different curriculum subjects and nature,
- improve the mental and emotional wellbeing of the students by making them feel at ease, comfortable, and relaxed with a clearer mind,

- allow students to engage in a lively atmosphere and direct experiences where they use their multiple senses which could enhance their motivation, creativity, and collaborative skills, and
- strengthen the relation between teachers and students.

These perceived advantages of outdoor education align with the literature in terms of the potentiality of outdoor education to improve the children's mental health and overall well-being (e.g. Marchant et al., 2019; McCree, Cutting, & Sherwin, 2018); social skills and relationships with their teachers and the wider community (e.g. Rickinson et al., 2004); and overall knowledge while learning in a 'sensory way' (Harris, 2017, p. 282).

### ***The perceived implementation challenges of outdoor education***

The risk perceptions of the study participants parallel findings in the literature suggesting that health and safety concerns are among the most prominent barriers to the provision of different forms of outdoor learning programs (e.g. Edwards-Jones, Waite, & Passy, 2016; Remington & Legge, 2017). This outcome is not surprising because contemporary societies are increasingly becoming risk averse (Gill, 2007). Furthermore, and similar to the Lebanese educators, Marchant et al. (2019) talked about a potential loss of concentration in the outdoors. According to the latter authors, overcoming this difficulty is linked to 'the teachers' ability to deliver meaningful activities that maintain pupils' attention' (p. 17). Covering the curriculum expectations represented another outdoor education implementation challenge that emerged from the study's findings and relevant literature (e.g. Edwards-Jones et al., 2016; Marchant et al., 2019; Palavan et al., 2016; Rickinson et al., 2004).

Other suggested implementation challenges were those pertaining to acquiring necessary funds to conduct outdoor sessions, finding and accessing appropriate outdoor places, and securing transportation to travel back and forth to the outdoor setting. Also, obtaining the support of different stakeholders, such as parents and school administration, and gaining the needed skills to effectively facilitate these sessions were perceived as potential obstacles to implementing outdoor education. These findings mirror resource-related implementation barriers proposed in pertinent literature (e.g. Palavan et al., 2016; Rickinson et al., 2004; Waite et al., 2016). Finally, weather conditions were advanced as a potential obstacle to implement outdoor education, especially in low temperatures. Concerns related to extreme weather conditions and their potential effects on children's health and wellbeing were presented in various resources on outdoor education (e.g. Edwards-Jones et al., 2016; Murray & O'Brien, 2005).

It is notable that the previously listed outdoor education implementation challenges were suggested by both public and private school educators who had different years of experiences in education and were teaching various subject matters from all grades, except for the challenge related to *time constraints* that was uniquely reported by private-school teachers (4 PR). This discrepancy could be, in part, linked to the seemingly more pressure exerted on private-school teachers compared to their public counterparts (Rizvi, 2020). In fact, Rizvi's article highlighted a substantial workload that some private school teachers in the Middle Eastern state of United Arab Emirates are bearing. Some of them were working up to 70 hours per week to, among other tasks, complete excessive paperwork and meet deadlines. This workload pressure was negatively impacting the educators' overall well-being which made them ponder switching to working in public schools known for a lighter workload.

### ***Implications of the study***

The present research outcomes have not only contributed to existing pertinent literature, but also addressed a research gap by shedding light on the underexplored field of outdoor education in the Middle Eastern context of Lebanon. Although outcomes from this study can not be generalized, different stakeholders from Lebanon, the Middle East, and elsewhere can capitalize on the findings

to inform policy, practice, and research aiming to support the provision of outdoor education in schools. Also, faculties of education could draw on the study's outcomes to guide the development of teacher-education programs that encompass a strand on outdoor education.

### **Recommendations**

Findings from this study revealed that despite possessing a positive viewpoint toward outdoor education, Lebanese participant educators tended to show reluctance to regularly integrate it into their teaching. This was mainly due to their perceived outdoor education implementation challenges which aligned with those proposed in relevant literature, including (1) risk perceptions associated with the outdoor activities, (2) curriculum coverage, (3) the lack of skills to facilitate effective outdoor education sessions, and (4) the needed funding and resources to carry out these sessions.

Overcoming these challenges requires a multilayer intervention. First, school leaders and Lebanese officials must provide the necessary support for educators who are planning to implement outdoor education sessions. For instance, the MEHE can offer educators the adequate training to gain the necessary skills for designing and conducting productive outdoor education sessions. Furthermore, various stakeholders can help secure needed funds, transportation, and pedagogical materials for the outdoor sessions. On this matter, the public school principal reported establishing cooperative partnerships with the local cultural centre and municipality to secure transportation and other funds for the realization of many outdoor education activities. Similar outcomes were highlighted by Gillis (2016) who advanced that developing community partnerships with local organizations represented a key factor for the successful implementation of a Canadian school-based outdoor environmental education program.

Moreover, policymakers, especially the MEHE, should work toward encouraging a regular integration of outdoor education in the teaching practice. This could be realized through adapting the curriculum content to make it suitable for outdoor education by, for example, emphasizing the significance of outdoor hands-on experiential learning activities.

On a related note, the study outcomes documented that none of the proposed environmental education activities were implemented in the outdoors. This could be attributed to several implementation challenges, including the lack of resources and skills as well as to the Lebanese prevalent societal norms that tend to go against environmentally friendly practice as it was suggested by two of the study participants and pertinent literature. Thus, Lebanese stakeholders need to put more emphasis on addressing the NEES guidelines through organizing environmentally oriented outdoor activities for the public (e.g. afforestation/reforestation, beach cleaning, and trash sorting campaigns). Also, they must provide necessary resources and training for school teachers to integrate outdoor environmental education activities in their teaching practices toward enhancing the students' understanding and awareness of different environmental issues. Taking these actions will help Lebanon toward fulfilling its commitment to the 2030 UN agenda for sustainable development (United Nations, [n.d.](#)).

Research-wise, the present work could represent a steppingstone for conducting other studies that aim to examine different aspects of outdoor education in Lebanon and other contexts where research is needed. For instance, findings suggested that teaching mathematics in the outdoors was perceived as either hard or unnecessary by Lebanese participants. Therefore, it would be informative to conduct research that further examines the viewpoints of Lebanese mathematics educators toward the integration of outdoor education in their teaching practices. Moreover, replicating a similar study in an urban Lebanese area or with high school educators would offer a clearer picture of the different aspects that demarcate the outdoor education practice in this Middle Eastern context.

To conclude, since the civil war broke out in 1975, Lebanon has been enduring a series of crises on many levels (Reuters, 2020). These combined crises, added to the influx of Syrian refugees caused by the ongoing war in Syria that started in 2011, have exacerbated the quality of life of the country's

residents on the financial, economic, environmental, healthcare, humanitarian, and education levels (Human Rights Watch, [n.d.](#)). As a part of the wider crisis response plan, the MEHE developed a National Policy for Alternative Education Pathways (NPAEP) which aligns with the UN 2030 Agenda for sustainable development and aims to 'provide an opportunity for Lebanon to address education for all [...] and] work towards supporting cohesion and harmony, avoiding conflict and promoting coexistence among the most vulnerable as well as with the refugees'. (MEHE, 2019, p. 15). Although outdoor education was not mentioned in the NPAEP, many of the outdoor education attributes, such as active-learning, child-centered, real-world applications, and flexible settings were among the key aspects of this policy. Furthermore, and aligning with the NPAEP objectives, the literature proposes that outdoor education can help promote, beside interpersonal and social skills, peace and reconciliation by providing 'opportunities for people to come together to tell their stories, experience the stories of others and model new possibilities' (Bartle, 1999, p. 84). Thus, based on the potentiality of outdoor education, I hope that outcomes from the present study would offer new perspectives for Lebanese stakeholders and encourage them to integrate this concept in the implementation of the NPAEP and prospective education reforms toward preparing knowledgeable, sustainable, and cohesive Lebanese communities.

## Note

1. In this document, I use the term outdoor education and outdoor learning interchangeably.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Notes on contributor

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## References

- The American Community School. (ACS). ([n.d.](#)). *The outdoor education program*. <https://www.acs.edu.lb/page.cfm?p=1079>
- The Association for Forests, Development and Conservation (AFDC), & the Center for Educational Research and Development (CERD). (2012). *The environmental education developed curriculum for the first educational cycle of primary education* (i.e. grades 1, 2, & 3).
- The Association for Forests, Development and Conservation (AFDC), & the Center for Educational Research and Development (CERD). (2014). *The environmental education developed curriculum for the second educational cycle of primary education* (i.e. grades 4, 5, & 6).
- Avci, G., & Gümüş, N. (2020). The effect of outdoor education on the achievement and recall levels of primary school students in social studies course. *Review of International Geographical Education (RIGEO)*, 10(1), 171–206. Special Issue
- Ballouard, J. M., Provost, G., Barré, D., & Bonnet, X. (2012). Influence of a field trip on the attitude of schoolchildren toward unpopular organisms: An experience with snakes. *Journal of Herpetology*, 46(3), 423–428.
- Bartle, M. (1999). Outdoor education in a peace and reconciliation community. In P. Higgins & B. Humberstone (Eds.), *Outdoor education and experiential learning in the UK* (ERIC Document Reproduction Service No. ED471730) (pp. 84–90). Plumpton, Penrith, Cumbria, UK: Institute for Outdoor Learning. Retrieved from <https://files.eric.ed.gov/fulltext/ED471730.pdf>
- Becker, C., Lauterbach, G., Spengler, S., Dettweiler, U., & Mess, F. (2017). Effects of regular classes in outdoor education settings: A systematic review on students' learning, social and health dimensions. *International Journal of Environmental Research and Public Health*, 14(5), 1–20.

- Bouzeineddine, S. F. (2012). *The integration and the impact of environmental education in school curriculum* [Master's project, Lebanese American University]. [https://laur.lau.edu.lb:8443/xmlui/bitstream/handle/10725/1251/Samar\\_Fouad\\_Bouzeineddine\\_Thesis.pdf?sequence=1&isAllowed=y](https://laur.lau.edu.lb:8443/xmlui/bitstream/handle/10725/1251/Samar_Fouad_Bouzeineddine_Thesis.pdf?sequence=1&isAllowed=y)
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Britannica (2021, April 29). Explore the political, religious, and socioeconomic divisions in Lebanon. *Encyclopaedia Britannica*. <https://www.britannica.com/summary/Lebanon>
- Bruce, B. C., & Bloch, N. (2012). Learning by doing. In N. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 1821–1824). Boston, MA: Springer.
- The Center for Educational Research and Development (CERD), & the Association for Forests, Development and Conservation (AFDC). (2012). *The National Environmental Education Strategy*.
- Cosgriff, M. (2008). What's the story? Outdoor education in New Zealand in the 21st century. *Physical Educator-Journal of Physical Education New Zealand*, 41(3), 14–25.
- Creswell, J. W., & Plano Clarke, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Dabaja, Z. F. (2020). *An explorative case study of the perceptions and attitudes of Lebanese school educators toward the integration of outdoor education in the teaching of school curricula* [Doctoral dissertation, University of Windsor]. <https://scholar.uwindsor.ca/etd/8442/>
- Dillon, J., Morris, M., O'Donnell, L., Reid, A., Rickinson, M., & Scott, W. (2005). *Engaging and learning with the outdoors - the final report of the outdoor classroom in a rural context action research project*. Slough, UK: National Foundation for Educational Research.
- Edwards-Jones, A., Waite, S., & Passy, R. (2016). Falling into LINE: School strategies for overcoming challenges associated with learning in natural environments (LINE). *Education*, 3-13. doi:10.1080/03004279.2016.1176066
- Ester, P., Simões, S., & Vinken, H. (2004). Cultural change and environmentalism: A cross-national approach of mass publics and decision makers. *Ambiente & Sociedade*, 7(2), 45–69.
- Fagan, M., & Huang, C. (2019, April 18). A look at how people around the world view climate change. *The Pew Centre Research*. <https://www.pewresearch.org/fact-tank/2019/04/18/a-look-at-how-people-around-the-world-view-climate-change/>
- Fägerstam, E. (2014). High school teachers' experience of the educational potential of outdoor teaching and learning. *Journal of Adventure Education & Outdoor Learning*, 14(1), 56–81.
- Finn, K. E., Yan, Z., & McInnis, K. J. (2018). Promoting physical activity and science learning in an outdoor education program. *Journal of Physical Education, Recreation and Dance*, 89(1), 35–39.
- Ghosn-Chelala, M., & Akar, B. (2021). Citizenship education for environmental sustainability in Lebanon: Public school teachers' understandings and approaches. *Environmental Education Research*, 27(3), 366–381.
- Gill, T. (2007). *No fear: Growing up in a risk averse society*. London, UK: Calouste Gulbenkian Foundation.
- Gillis, N. Y. (2016). Implementing a made-in-New Brunswick outdoor environmental education program: A case study of Salem elementary school. *Journal of New Brunswick Studies*, 7(1), 129–141.
- Grant, L. (2017). *Contextualized garden-based mathematics* [Master's thesis, Lakehead University]. <https://knowledgecommons.lakeheadu.ca/handle/2453/4243>
- Harris, F. (2017). The nature of learning at Forest School: Practitioners' perspectives. *Education 3-13: International Journal of Primary, Elementary and Early Years Education*, 45(2), 272–291.
- Hawxwell, L., O'Shaughnessy, M., Russell, C., & Shortt, D. (2019). 'Do you need a kayak to learn outside?': A literature review into learning outside the classroom. *Education*, 47(3), 322–332.
- Heras, R., Medir, R. S., & Salazar, O. (2020). Children's perceptions on the benefits of school nature field trips. *Education*, 48(4), 379–391.
- Human Rights Watch. (n.d.). *Lebanon events 2020*. <https://www.hrw.org/world-report/2021/country-chapters/Lebanon>
- Kezaride, K. D. (2015). *Environmental education, values and attitudes of youth in Lebanese secondary schools: A comparative analysis* [Master's thesis, University of Agder]. <https://uia.brage.unit.no/uia-xmlui/handle/11250/300712>
- Marchant, E., Todd, C., Cooksey, R., Dredge, S., Jones, H., Reynolds, D., ... Brophy, S. (2019). Curriculum-based outdoor learning for children aged 9-11: A qualitative analysis of pupils' and teachers' views. *PLOS ONE*, 14(5), e0212242.
- McCree, M., Cutting, R., & Sherwin, D. (2018). The hare and the tortoise go to Forest School: Taking the scenic route to academic attainment via emotional wellbeing outdoors. *Early Child Development and Care*, 188(7), 980–996.
- The Ministry of Education and Higher Education of Lebanon (MEHE). (2019). *National policy for alternative education pathways: Meeting the diverse learning needs for the vulnerable and marginalized children and youth in Lebanon*. [https://en.unesco.org/sites/default/files/national\\_policy-final\\_en.pdf](https://en.unesco.org/sites/default/files/national_policy-final_en.pdf)
- The Ministry of Education and Higher Education of Lebanon (MEHE). (n.d.). *Foreign curriculum*. <https://www.mehe.gov.lb/en/Pages/Transactions/ForeignCurriculum.aspx>
- Murray, R., & O'Brien, L. (2005). *Such enthusiasm – A joy to see: An evaluation of Forest School in England*. New Economics Foundation and Forest Research, UK. [http://www.forestry.gov.uk/pdf/ForestSchoolEnglandReport.pdf/\\$FILE/ForestSchoolEnglandReport.pdf](http://www.forestry.gov.uk/pdf/ForestSchoolEnglandReport.pdf/$FILE/ForestSchoolEnglandReport.pdf)
- Mygind, E. (2007). A comparison between children's physical activity levels at school and learning in an outdoor environment. *Journal of Adventure Education and Outdoor Learning*, 7(2), 161–176.

- Naoufal, P. (2020, February 28). Lebanon to close all schools in effort to thwart spread of coronavirus. *An-Nahar*. <https://en.annahar.com/article/1133342-Lebanon-to-close-all-schools-in-effort-to-thwart-spread-of-coronavirus>
- Palavan, O., Cicek, V., & Atabay, M. (2016). Perspectives of elementary school teachers on outdoor education. *Universal Journal of Educational Research*, 4(8), 1885–1893.
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, 42(5), 533–544.
- Pampel, F. C. (2014). The Varied Influence of SES on Environmental Concern. *Social Science Quarterly*, 95(1), 57–75.
- Polley, S., & Pill, S. (2015). A review of the literature on outdoor education in Australian schools. Edited Proceedings of the 29th ACHPER International Conference (pp. 33–40), 13–15 April, Adelaide.
- Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *The Journal of Environmental Education*, 17(3), 13–15.
- Purc-Stephenson, R. J., Rawleigh, M. H., Kemp, H., & Asfeldt, M. (2019). We are wilderness explorers: A review of outdoor education in Canada. *Journal of Experiential Education*, 42(4), 364–381.
- Pyman, H., & Pammett, J. (n.d.). *Environmental attitudes: A comparison of Canada, Europe, and the United States over time*. Carleton University Survey Centre. [https://carleton.ca/canadaeurope/wp-content/uploads/Heather-Pyman\\_Environmental-Attitudes-A-comparison-of-Canada-Europe-and-the-US.pdf](https://carleton.ca/canadaeurope/wp-content/uploads/Heather-Pyman_Environmental-Attitudes-A-comparison-of-Canada-Europe-and-the-US.pdf)
- Remington, T., & Legge, M. (2017). Outdoor education in rural primary schools in New Zealand: A narrative inquiry. *Journal of Adventure Education and Outdoor Learning*, 17(1), 55–66.
- Reuters. (2020, December 24). Timeline: Lebanon's ordeal from civil war to port blast. *Reuters*. <https://www.reuters.com/article/us-Lebanon-crisis-turmoil-timeline-idUSKBN28Y051>
- Richardson, M., & Simmons, D. (1996). *Recommended competencies for outdoor educators*. ERIC Digest. Charleston, WV: ERIC Clearing house on Rural Education and Small Schools (ERIC Identifier: ED391624).
- Richardson, T., & Murray, J. (2016). Are young children's utterances affected by characteristics of their learning environments? A multiple case study. *Early Child Development and Care*. doi:10.1080/03004430.2016.1211116
- Richmond, D., Sibthorp, J., Gookin, J., Annarella, S., & Ferri, S. (2018). Complementing classroom learning through outdoor adventure education: Out-of-school-time experiences that make a difference. *Journal of Adventure Education and Outdoor Learning*, 18(1), 36–52.
- Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., & Benefield, P. (2004). *A review of research on outdoor learning*. Shropshire, UK: Field Studies Council.
- Rizvi, A. (2020, January 2). Punishing workloads forcing UAE private school teachers to quit, evidence suggests. *The National UAE*. <https://www.thenational.ae/uae/punishing-workloads-forcing-uae-private-school-teachers-to-quit-evidence-suggests-1.959092>
- Robbins, A. (2015). *Synthesizing the outdoor education literature to create a definition and list of primary objectives* [Master's thesis, University of Wyoming]. <https://pdfs.semanticscholar.org/4e26/6ca6204636f1c05f941ee7be859974ce9c44.pdf>
- Sahrakhiz, S., Haring, M., & Witte, M. D. (2018). Learning opportunities in the outdoor school—empirical findings on outdoor school in Germany from the children's perspective. *Journal of Adventure Education and Outdoor Learning*, 18(3), 214–226.
- Sharp, J. L., Mobley, C., Hammond, C., Withington, C., Drew, S., Stringfield, S., & Stipanovic, N. (2012). A mixed methods sampling methodology for a multisite case study. *Journal of Mixed Methods Research*, 6(1), 34–54.
- Skaf, A., & Habib, Z. (2008). Lebanon. In I. V. S. Mullis, M. O. Martin, J. F. Olson, D. R. Berger, D. Milne, & G. M. Stanco (Eds.), *TIMSS 2007 encyclopedia: A guide to mathematics and science education around the world* (Vol. 1, pp. 355–364). Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.
- Turtle, C., Convery, I., & Convery, K. (2015). Forest Schools and environmental attitudes: A case study of children aged 8–11 years. *Cogent Education*, 2(1), 1–14.
- United Nations. (n.d.). *Our work on the sustainable development goals in Lebanon*. <https://Lebanon.un.org/en/sdgs>
- University of Colorado. (2020, November 3). The great outdoors: COVID-19-compatible learning experiences for all. *CU Boulder Today*. <https://www.colorado.edu/today/2020/11/03/great-outdoors-covid-19-compatible-learning-experiences-all>
- Waite, S., Bølling, M., & Bentsen, P. (2016). Comparing apples and pears?: A conceptual framework for understanding forms of outdoor learning through comparison of English Forest Schools and Danish udeskole. *Environmental Education Research*, 22(6), 868–892.
- Williams-Sieghfredsen, J. (2005, September 16). The competent child: Developing children's skills and confidence using the outdoor environment: A Danish perspective. Paper presented at the British Educational Research Association Annual Conference, University of Glamorgan, South Wales, September 14–17.
- World Bank. (n.d.). *GDP per capita – Lebanon*. <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=LB>
- Xing, L. (2020, August 27). Outdoor learning gains traction as schools get ready to open amid COVID-19. *CBC News*. <https://www.cbc.ca/news/Canada/toronto/outside-learning-forest-schools-covid-19-education-1.5701306>
- Yildirim, G., & Akamca, G. O. (2017). The effect of outdoor learning activities on the development of preschool children. *South African Journal of Education*, 37(2), 1–10.