

Let's Take This Outside: Rethinking Outdoor Education

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Abstract

Several health experts have strongly recommended spending time outdoors for physical and mental well-being. As students progress through the schooling system, they spend less time outdoors. There is an insufficient amount of research on how outdoor learning can benefit students at the university level. There is a consistent stream of research looking at methods of learning and how to create better environments for learning. However, studies on outdoor learning have been few. Outdoor learning, in general, and at the university level, in particular, has numerous advantages for learners when conditions are taken into consideration. In this review, 20 studies were selected. They discuss ways in which outdoor learning in universities can benefit both students and teachers alike. The review concludes that outdoor learning can have various advantages if properly taught.

Keywords: outdoor education, experiential learning, educational psychology, curriculum development, educational innovation

1. Introduction

Outdoor learning has been practiced throughout human history, going back to the days of Plato and Epicurus in ancient Greece. The term “kindergarten” refers to the first classes for children, which literally means “children’s garden” in German. It was during this period of experimentation in the education system that educational theorists became interested in experiential learning by connecting children to nature and school with practical life. During this period, ideas about education were practical with foundations in connections to nature and home life. Without knowing it, the children inherently learned about climate change, pollution, teamwork, and hard work. In the late 1800s, however, schooling systems began to shift indoors. The reasons for this are numerous, but safety was at the forefront of the movement.

With the advent of the mass education system, learning has been conducted in a largely indoor setting. The switch from outdoor to indoor classroom education and its health effects has not received substantial research. It was not until the latter half of the 20th century that schools began experimenting with the idea of holding classes outdoors as an alternative to the standard indoor classroom setting. However, studies have shown that being in climate-controlled environments can hinder learning (Guo, 2023). As students progress through the schooling system from kindergarten to high school, they spend less time outdoors. This trend has potentially very serious implications for health if exposure to natural environments is causal to short-term recovery from stressor mental fatigue and to overall long-term improvements in health and well-being (Pearson & Craig, 2014). In universities, the time spent outdoors is almost non-existent. Studies on outdoor education research have shown that there are benefits to holding classes outside in elementary schools (James & Williams, 2017). However, few, if any, studies that look into the benefits of outdoor learning in the university setting. This paper examines how outdoor education can benefit students and even teachers and why this practice should be implemented as a regular part of university curricula.

1.1 Aim of the Study

This paper demonstrates the benefits of holding outdoor classes in a university setting. To reach the goal of the paper, this review will answer the following question:

- What are the advantages of holding classes outdoors in a university setting?

2. Methodology

Twenty relevant studies documenting the benefits of outdoor learning were selected. They were critically evaluated, and the results are summarized.

2.1 *The Advantages of Holding Classes Outdoors*

Outdoor learning provides students with two different perspectives:

- a physical one where they can actually have a full view of their surroundings.
- a non-physical view where they are more able to explore their views on different ideas.

These different outlooks that can be experienced should be explored in the university setting. It is in universities where students are expected to broaden their horizons and views on the world. However, it is difficult to expect university students to broaden their so-called horizons when they do not have the opportunity to see that horizon and think about their place in the world. Exploring their ideas is another benefit of taking classes outdoors. Several studies have been conducted on how being outdoors can improve mental stimulation (Marchant et al., 2019). Depression is the leading cause of mental-health related disease globally (Herrmann et al., 2019). Note that mental health issues are on the rise worldwide and besides over-the-counter medicines, holistic approaches, especially in education, are often overlooked (Hyvönen et al., 2023). If so and teachers truly want to give their students a university experience that they will not forget, the university setting is ripe for alternatives in educational methods which will not only benefit students' socially, but mentally and physically. While in university, students have the opportunity to develop their social skills in an adult setting, which they will need in their adult life.

2.2 *Outdoor Education Develops Social Skills*

Outdoor education offers opportunities for students to work in teams, cooperate with each other, and engage and collaborate with others. In a standard classroom, students sit in rows, which limit the number of opportunities to engage with others. This in turn can lead to students feeling isolated or being invisible to the teacher. Outdoor classes give everyone in the class the opportunity to sit with friends and make new friends. Once the barriers of desks are removed, students can feel a better sense of cohesion with others. Even for students who prefer to work alone, the freedom to choose where they want to sit and work is beneficial. As mentioned earlier in this paper, depression is on the rise worldwide. Depression is linked to feelings of loneliness and isolation. In studies conducted in the elementary school setting, children were shown to be calmer and more collected and better engaged with others (James & Williams, 2017). The process of encouraging the development of pro-social skills through physical activity/sport participation, and then reinforcing them over time via 'transfer' to other contexts, can be better conceptualized as a means of slowly reforming the habitus of disaffected or disengaged young people (Armour & Williams, 2012). Furthermore, the active lifestyle, nomadic process, and emphasis on the whole person can all be seen as possible contributors to improved mood or decreased anxiety in young people (Combs et al., 2016). Activities in the (outdoor learning) modules have a significant impact on cooperative teamwork (Harun & Salamuddin, 2014). The frequency of connections with the natural world, activities that foster executive function, structuring outdoor learning, cognitive growth and the development of new skills impact well-being in a positive manner (Mann et al., 2021). Simply put, being outside helps students cope with other issues in their lives and connect better with others. It is interesting to note, however, that a majority of these studies are only conducted at the elementary to the middle school level. These social skills are just as important as, if not more important, in a student's adult life.

2.3 *Outdoor Education Improves Cognitive Ability*

The term cognitive development refers to how children think, explore, and figure things out. It is these skills that help children understand the world. During the developmental years, children learn how to make sense of not only the world but also how social connections work. According to Jean Piaget's model of cognitive development, cognitive development continues for much longer than elementary school age. Cognitive development continues through the early to mid-twenties. This is precisely the age range of university students. The reality is that in these final critical years of cognitive development, little to no time is being spent on outdoor education. Even with all the research that has proven of the benefits of outdoor education, it is largely ignored in the university setting.

As demonstrated, outdoor education positively affects younger students. As there are few to no articles on the effects of outdoor education on university students, we may look at the effect of nature on senior citizens. Elsadek et al. found in their 2021 study that indirect contact with nature enhanced physiological and psychological conditions of the elderly. In this study, older individuals were shown images with urban landscapes and images with natural scenery while having physiological sensors connected to their heads. Brain α waves were measured. When shown natural scenery, participants' feelings were correlated with calmness, lower feelings of depression, and relaxation. These brain α waves are also associated with creativity.

Another important aspect to note is that not all students are suited to classroom instruction. It is common for students to lose interest and be unmotivated in the classroom but become alive and active once outside the

classroom. Students have reported to have performed better in terms of both selective and sustained attention when completing tasks in the green area (Mason et al., 2022). Another example of this can be seen in James and Williams' (2017) study on middle schoolers and outdoor experiential learning. In this study, middle schoolers were taken outdoors to learn classroom topics with hands-on experience. The study concluded that students were interested in the outdoor experience and that they felt a sense of independence from their parents and teamwork with their classmates at the same time. They found that students who had behavior and attention issues in class improved their overall classroom performance once they were taken outside.

2.4 Outdoor Education Is Inclusive

In the traditional classroom, desks and seating plans, no matter how they are arranged, can lead students to feel boundaries between themselves and their classmates. Removing these barriers gives students opportunities for equality in the space that they inhabit and more flexibility to move around. Another benefit is that students will have time away from technology. They will be encouraged to look up, look around, and look at each other. The outdoor setting can also create more feelings of closeness with teachers.

Students with special educational needs and disabilities can also have the playing field level. In traditional classrooms, for example, students in wheelchairs are separated from other students, usually sitting in the back. In an outdoor setting, students in wheelchairs can move around their environment and not feel limited to the small confines of the classroom. It is important to establish this idea of empathy with everyone in the classroom and think about how best to include all students in an inclusive environment. The majority of students have a low threshold of tolerance for places where they must be passive and absorb information. However, when students are fully engaged in the material, i.e., going outside and learning on their own, their motivation becomes stronger, and their engagement is easily seen. This leads to memorable and longer-lasting learning (James & Williams, 2017). Any teacher with experience in the classroom has no doubt noticed some students who seem out of place or unmotivated in classroom learning. This student should not be blamed for their lack of motivation or unruly behavior. Most of the time, these cases come from students not fitting in to the traditional classroom. Professors should be honest with themselves. If the tables were turned, most professors would not enjoy sitting in the students' seats.

2.5 Outdoor Education Strengthens the Relationship with Nature

Shinrin yoku, which originated in Japan, means 'bathing all the senses' whilst walking in the forest. The main purpose of forest bathing is to exercise or meditate in the forest environment, using the forest environmental factors to promote human physical and psychological health (Wen et al., 2019). Although research in this field requires further follow-up assessments, *shinrin yoku*, or being outside, has been shown to reduce mental health symptoms, particularly anxiety (Kotera et al., 2022). In the early 1900s, the concept of fresh air schools was used to combat tuberculosis (Korr, 2016). There are theories that account for humans' natural relationship with nature and the associated benefits. With the increasing cases of anxiety, depression, and other mental health issues, university students could benefit greatly from being exposed to nature. As of this writing, an increasing number of young people are spending vast amounts of time in front of screens. This not only lead to feelings of isolation, but it slowly erodes their connections to nature. With all the activity and distractions that screens provide, it is no wonder that the relationships with nature are being forgotten. In most cases, even when exposed to nature, the public is more concerned about taking a picture and sharing it on social media. It is interesting to note that, while social media has a role to play in increasing cases of depression and anxiety, there is an imminent threat to nature (Magnusson, 2019). Because the classroom environment is more controlled, teachers can direct students to leave their phones in the classrooms while they go outside to perform outdoor-based activities. At the very least, this gives students a chance to experience nature without technology distracting them. In the university setting, students have already had years of exposure to screens to the point where it is normal to have a screen, whether a laptop or phone in front of them. In a way, the university setting is the last chance that students have to experience nature in a controlled setting with their peers and teachers. However, it is ultimately up to the teacher to initiate this practice.

With deepened connections to the natural world alongside their ability to plan and execute goal-oriented behaviors, children are able to better think about their contributions to a sustainable future (Valentini & Donatiello, 2021). With universities' current push for sustainability and greater attention to how human activities impact the environment, it is suggested that outdoor classes be held, especially at the university level. It is in the university where students major in subjects such as sustainability, tourism, and eco-tourism. This is precisely why universities should consider holding more classes outdoors.

2.6 Outdoor Education Positively Impacts Teachers

Although the effects of teacher well-being and teaching quality have only had a limited amount of research, the

effect of outdoor education on teachers can have benefits on students and the overall educational system. The ability of teachers to take care of their students to the best of their ability depends on their own well-being (Deschamps et al., 2022). Because of fear over safety concerns, teachers who taught school children reported to have more authoritative behavior (Marchant et al., 2019). However, in the case of universities, teachers may be able to be more of a guide than a disciplinarian. Another obstacle that has been noted on the teachers' side is lack of confidence for teaching in the outdoor setting. Again, if lessons can be well planned in advance and connect meaningfully to the topic, it is possible to effectively teach outdoors whilst giving a beneficial lesson and experience to students. Although there are a number of barriers on the teachers' side of outdoor learning, the benefits outweigh the worries posed by taking classes outside.

Having said this, the confidence gained by teachers once they are able to effectively plan their lessons outdoors can have a huge impact on the connection between students and the teacher. Students will become more connected to the teacher, and in this way, nature is an intermediary in the process of improving relations between teacher and student and at the same time, improving behavior issues that can arise in the classroom. Taking students outdoors can give them space to be themselves. Both teachers and students claimed in Myhre's (2023) study that the outdoors contributes to increased confidence in speaking English due to more space and greater distance between the students (Myhre et al., 2023). This increased confidence can, in turn, give teachers more confidence in their lessons. As mentioned before, a teacher should be in good mental and physical capability in order to give effective lessons. Teacher burnout is a very real occurrence, and many studies having been published on the topic. To avoid or prevent burnout, nature, being a free resource with no real side effects, can give teachers the boost they need to create memorable experiences for university students.

Unfortunately, most studies on this topic have been based on the experiences of primary-age children. As the level of school setting increases, the studies on outdoor learning begins to dwindle. Therefore, outdoor learning needs a push in the direction of the university. Universities, in turn, could benefit from outdoor learning programs where all teachers could be included in the process of creating outdoor classes. The suggestion here is not that all classes be held outdoors, but that outdoor lessons be periodically included in curricula. The Sobel (2020) study took children outside occasionally and reported at the end of a semester that children developed more grit, perseverance, confidence. A sense of place and happiness develops, and their test scores are improved (Sobel, 2020). The well-being of teachers and students could create major positive effects where everyone benefits in all aspects of health and learning and, most importantly, the desire and motivation of students to learn.

3. Conclusion

Learning in a university setting encourages higher learning. Students who attend university are being prepared to enter society as young adults who are expected to navigate their way through the world. Teachers should encourage, in any way possible, habit-building that encourages learning. Because the idea of outdoor learning has been mostly ignored, especially in higher education, it is important for teachers to look for new ways to encourage learning without using gimmicks or relying too much on trends or technology. Technology has its place in education, but it should not be relied on too heavily. Holding classes outdoors can help students with confidence and motivation and can help make learning interesting for university students. By giving university students a new setting in which to learn, they can become more creative and open to new ideas.

Many researchers have concluded that there are numerous benefits to being outdoors. It has been advised by doctors, physicians, and psychologists to maintain physical and mental well-being, as being outdoors provides students with personal, social, emotional, and other health benefits. Being outdoors is seen as a great help for young learners and helps them overcome many issues that adults face in the modern world, such as depression and anxiety. The results of many articles in this review showed that being outdoors improved numerous areas of health in children and that the act of being outdoors can indeed improve learning.

Other researchers have established that being outdoors in an elementary school setting can improve children's social and learning abilities. Despite there not being much research done on outdoor learning in the university setting, outdoor learning is seen as improving the mood of students and helps them to overcome negative attitudes about education. The results of most articles in this review showed that the sole act of being outside while in class improved numerous areas of students' well-being and social skills.

Among other benefits and advantages, university students can learn about others' beliefs and lifestyles. Being outdoors takes people back to their natural state of being and helps them to relax and come to a more focused state. For example, being outside helps improve children's relationship with nature. As most universities shift their focus to sustainable growth and maintaining the environment, it is surprising that universities are not looking at holding more classes outdoors. At the very least, students can be given assignments that require them to be outside. If the

assignments are group-oriented, students can learn more about teamwork and improve their social skills, all of which will help them when they go off into the real world, where these skills are highly valued.

Some researchers have proven that the idea of outdoor classes helps substantially in the growth of children. Outdoor classes can be used as a positive stimulus to motivate university students and can even be beneficial for teachers. Physical and cognitive benefits are easily achievable just by the simple act of being outdoors. Holding classes outdoors in the university setting could be of the most effective but ignored practices occurring in the university system. Outdoor learning encourages children to enhance their abilities and can even encourage their interest in learning. Longitudinal studies have been conducted with children who had exposure to outdoor classes and how it benefitted them in later stages of life. The results show that it helps in the long term. Why outdoor classroom settings are increasingly ignored as students get older raises even more questions. However, this paper aims to garner interest in taking students outside while they are in university and encourage teachers to think outside the “box” of the classroom and experience the benefits of outdoor learning.

The philosophy of modern times, specifically that of the present day, relies on experiments and research articles that tend to ameliorate the present social condition, which in turn contributes to easing indulgent lifestyles. The ways in which nature is beneficial to all people is nothing new and should not be viewed as a trend. It is precisely nature that has inspired the greatest artworks created by man. The natural world is free for all to use and does not need research to explain its grandeur and benefits to mankind. The goal of this article is to remind teachers, especially at the university level, which is the last opportunity for students to learn in an educational setting, that the addition of outdoor education in the curriculum is justified and necessary.

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References

- Armour, K., & Sandford, R. (2012). Positive youth development through an outdoor physical activity programme: evidence from a four-year evaluation. *Educational Review*, 65(1), 85–108. <https://doi.org/10.1080/00131911.2011.648169>
- Combs, K. M., Hoag, M. J., Javorski, S., & Roberts, S. D. (2016). Adolescent Self-Assessment of an Outdoor Behavioral Health Program: Longitudinal Outcomes and Trajectories of Change. *Journal of Child and Family Studies*, 25(11), 3322–3330. <https://doi.org/10.1007/s10826-016-0497-3>
- Deschamps, A., Scrutton, R., & Ayotte-Beaudet, J.-P. (2022). *School-based outdoor education and teacher subjective well-being: An exploratory study*. *Frontiers in Education*.

- <https://doi.org/10.3389/feduc.2022.961054>
- Elsadek, M., Shao, Y., & Liu, B. (2021). Benefits of Indirect Contact With Nature on the Physiopsychological Well-Being of Elderly People. *HERD: Health Environments Research & Design Journal*, 14(4), 227–241. <https://doi.org/10.1177/19375867211006654>
- Guo, M., Yu, W., Sun, Y., Wang, L., Zhou, H., & Zhang, Y. (2023). Effects of increasing indoor negative air ions on cognitive performance and health of high pure CO₂ Level-Exposed college students. *Indoor Air*, 2023, 1–11. <https://doi.org/10.1155/2023/8298339>
- Harun, M., & Salamuddin, N. (2014). Promoting Social Skills through Outdoor Education and Assessing Its Effects. *Asian Social Science*, 10(5), 71. <https://doi.org/10.5539/ass.v10n5p71>
- Herrman, H., Kieling, C., McGorry, P., Horton, R., Sargent, J., & Patel, V. (2019). Reducing the global burden of depression: a Lancet-World Psychiatric Association Commission. *The Lancet*, 393(10189), e42–e43. [https://doi.org/10.1016/S0140-6736\(18\)32408-5](https://doi.org/10.1016/S0140-6736(18)32408-5)
- Hyvönen, K., Salonen, K., Paakkolanvaara, J., Väkeväinen, P., & Korpela, K. (2023). Effects of nature-based intervention in the treatment of depression: A multi-center, randomized controlled trial. *Journal of Environmental Psychology*, 85, 101950. <https://doi.org/10.1016/j.jenvp.2022.101950>
- James, J., & Williams, T. M. (2017). School-Based Experiential outdoor education. *Journal of Experiential Education*, 40(1), 58–71. <https://doi.org/10.1177/1053825916676190>
- Korr, M. (2016). Fighting TB with Fresh-Air Schools. *Rhode Island Medical Journal*, 99(9), 75–76. Retrieved from <https://go.openathens.net/redirector/liberty.edu?url=https://www.proquest.com/scholarly-journals/fighting-tb-with-fresh-air-schools/docview/1819303832/se-2>
- Kotera, Y., Richardson, M., & Sheffield, D. (2022). Effects of Shinrin-Yoku (Forest Bathing) and Nature Therapy on Mental Health: a Systematic Review and Meta-analysis. *International Journal of Mental Health and Addiction*, 20(1), 337–361. <https://doi.org/10.1007/s11469-020-00363-4>
- Magnusson, H. M. (2019). *Nature is Free: Technology's Isolating Grip on Teenagers and How to Reconnect in Nature* (Order No. 13808312). ProQuest Dissertations & Theses Global. (2207641095). Retrieved from <https://go.openathens.net/redirector/liberty.edu?url=https://www.proquest.com/dissertations-theses/nature-is-free-technology-s-isolating-grip-on/docview/2207641095/se-2>
- Mann, J., Gray, T., Truong, S., Sahlberg, P., Bentsen, P., Passy, R., ... Cowper, R. (2021). A systematic review protocol to identify the key benefits and efficacy of Nature-Based Learning in outdoor educational settings. *International Journal of Environmental Research and Public Health*, 18(3), 1199. <https://doi.org/10.3390/ijerph18031199>
- 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. <https://doi.org/10.1371/journal.pone.0212242>
- Mason, L., Zagni, B., Bacchin, F., Frison, C., & Scrimin, S. (2022). Children's attentional processes in outdoor and indoor environments: The role of Physiological Self-Regulation. *International Journal of Environmental Research and Public Health*, 19(20), 13141. <https://doi.org/10.3390/ijerph192013141>
- Myhre, T. S., Dewaele, J., Fiskum, T. A., & Holand, A. M. (2023). Anxiety and enjoyment among young teenagers learning English as a foreign language outdoors: a mixed-methods study. *Innovation in Language Learning and Teaching*, 17(4), 827–844. <https://doi.org/10.1080/17501229.2022.2161550>
- Pearson, D. G., & Craig, T. (2014). The great outdoors? Exploring the mental health benefits of natural environments. *Frontiers in Psychology*, 5, 1178. <https://doi.org/10.3389/fpsyg.2014.01178>
- Sobel, D. (2020). School Outdoors: the pursuit of happiness as an educational goal. *Journal of Philosophy of Education*, 54(4), 1064–1070. <https://doi.org/10.1111/1467-9752.12458>
- Valentini, M., & Donatiello, P. (2021). Outdoor education as a way of life. *Journal of Physical Education and Sport*, 21(1), 618–623. <https://doi.org/10.7752/jpes.2021.s1072>
- Wen, Y., Yan, Q., Pan, Y., Gu, X., & Liu, Y. (2019). Medical empirical research on forest bathing (Shinrin-yoku): a systematic review. *Environmental Health and Preventive Medicine*, 24(1), 70. <https://doi.org/10.1186/s12199-019-0822-8>

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