



Outdoor-based teaching

Literaturliste

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1. Literatur zu Unterricht im Freien

- 1.1 Barfod, K. S., & Daugbjerg, P. (2018). Potentials in Udeskole: Inquiry-Based Teaching Outside the Classroom. *Frontiers in Education*, 3(May), 1–10. <http://doi.org/10.3389/feduc.2018.00034>
- 1.2 Lloyd, A., Truong, S. & Gray, T. Place-based outdoor learning: more than a drag and drop approach. *Journal of Outdoor and Environmental Education* 21, 45–60 (2018). <https://doi.org/10.1007/s42322-017-0002-5>
- 1.3 Dillon, J., Rickinson, M., Teamey, K., Morris, M., Choi, M.-Y., Sanders, D., & Benefield, P. (2006). The value of outdoor learning: evidence from research in the UK and elsewhere. *School Science Review*, 87, 107–111. (Artikel) https://www.univie.ac.at/freilanddidaktik/literatur/Dillon_School%20Sc.%20Rev._2006_The%20value%20of%20outdoor%20learning.pdf
- 1.4 Ryan G. Dale, Robert B. Powell, Marc J. Stern & Barry A. Garst (2020) Influence of the natural setting on environmental education outcomes, *Environmental Education Research*, 26:5, 613-631, <https://doi.org/10.1080/13504622.2020.1738346>

(Auszug Discussion) Spending a majority of the field trip experience outside versus inside was also correlated with positive learning outcomes. This finding supports evidence from previous research suggesting natural environments can enhance outcomes associated with EE21 including interest, attitudes, emotions, and learning (Kahn and Kellert 2002; Kaplan and Kaplan 1989; Kaplan, Kaplan, and Ryan 1998; Kellert 2005). However, the results also highlight that simply exposing youth (ages 9-11) to the outdoors will not necessarily produce transformative outcomes. Instead, results reinforce the importance of complementing outdoor and novel experiences with effective programming, implementation, and pedagogical approaches (Duerden and Witt 2012; Durlak and DuPre 2008; Morgan, Sibthorp, and Browne 2016). With this knowledge, we urge practitioners to highlight the unique attributes of place, enhance novelty, and spend most of a field trip outside and immersed in the natural environment, yet to do so within a program framework that fully integrates and implements effective pedagogical practices.

- 1.5 Outdoor Learning Practical guidance, ideas and support for teachers and practitioners in Scotland www.educationscotland.gov.uk

Section 2

- 1.6 Higgins, P. (2008) Why indoors? The role of outdoor learning in sustainability, health and citizenship http://www.docs.hss.ed.ac.uk/education/outdoored/higgins_why_indoors.pdf
- 1.7 Jolly, L., Krogh, E., Nergaard, T., Parow, K., & Verstad, B. (2004) The Farm as a Pedagogical Resource: An evaluation of the co-operation between agriculture and primary school in the county of Nord-Trondelag, Norway.
http://ifsa.boku.ac.at/cms/fileadmin/Proceeding2004/2004_WS4_22_Jolly.pdf
Symposiumsbeitrag, 6th European Symposium on Farming and Rural Systems Research and Extension → Abschnitt - The Farm as a Pedagogical Resource
- 1.8 Torkos, H. (2019) Time, space and resource management in outdoor education. (Attachment)

2. Literatur zur Wirkung von Unterricht im Freien auf Schülerinnen und Schüler

2.1 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. <http://doi.org/10.3390/ijerph14050485>

2.2 Creative learning environments in education—A systematic literature review
Davies et al., 2013 (Auszug) <https://doi.org/10.1016/j.tsc.2012.07.004>

Use of the outdoor environment

There is reasonable evidence across several studies that taking pupils out of the classroom and working in an outdoor environment for part of their time in school can foster their creative development (Addison et al., 2010, Bancroft et al., 2008, Borradaile, 2006, Dillon et al., 2007). The reasons for this may be connected with ownership and collaboration. In a case study of a primary school which worked with landscape architects to transform its outside space, Dillon et al. (2007) found that, whilst each teacher felt ownership of particular spaces indoors, once outdoors, time and space was seen as more owned by pupils. Inside, work tended towards being individually focused, whereas outside, learning activities were more likely to involve collaboration. In the context of early years education, Bancroft et al. (2008) recommend taking an initial walk, whether in urban or rural neighbourhoods, which can provide a rich context for the purpose of discovering children's schemas and interests on which teachers can build to enhance their creativity. Forest School is an approach to outdoor education which offers an alternative teaching environment, to complement the indoor curriculum. Following three field visits each to two forest schools in Scotland, gathering interview and self-evaluation data from staff and pupils, Borradaile (2006) concluded that the characteristics of forest schools as 'creative environments' include:

- Use of a local woodland (therefore 'wild') setting.
- Regular, frequent contact in the same setting over a significant period of time.
- Providing freedom to explore using multiple senses and intelligences.
- Time and space for individual learning styles to be recognised and nurtured.
- A low pupil:adult ratio.

These characteristics may be transferable to work in other outdoor environments.

2.3 Mygind, E. (2009). A comparison of children's statements about social relations and teaching in the classroom and in the outdoor environment. *Journal of Adventure Education and Outdoor Learning*, 9(2), 151- 16

3. Literatur zur Gesundheit – Bewegung – Natur

- 3.1 Mygind, E. (2007). A comparison between children's physical activity levels at school and learning in an outdoor environment. *Journal of Adventure Education & Outdoor Learning*, 7(2), 161–176. <http://doi.org/10.1080/14729670701717580>
- 3.2 Gill, T. (2011) Children and nature. A Quasi-systematic **review** of the empirical evidence. Greater London Authority. https://www.academia.edu/5775760/Children_and_nature_A_quasi_-systematic_review_of_the_empirical_evidence
- 3.3 Malone, K. and Waite, S. (2016) Student Outcomes and Natural Schooling. Plymouth: Plymouth University. Available online: https://www.plymouth.ac.uk/uploads/production/document/path/6/6811/Student_outcomes_and_natural_schooling_pathways_to_impact_2016.pdf
- 3.4 Nielsen, G., Mygind, E., Bølling, M., Otte, C. R., Schneller, M. B., Schipperijn, J., Bentsen, P. (2016). A quasi-experimental cross-disciplinary evaluation of the impacts of education outside the classroom on pupils' physical activity, well-being and learning: the TEACHOUT study protocol. *BMC Public Health*, 16(1), 1–15. <http://doi.org/10.1186/s12889-016-3780-8>
- 3.5 White, R. (2004). Young children's relationship with nature: Its importance to children's development & the earth's future. White Hutchinson Leisure & Learning Group. <https://www.whitehutchinson.com/children/articles/childrennature.shtml>

4. Erfahrungen von Studierenden und Dozierenden

- 4.1 Education Outside the Classroom: Research to Identify What Training is Offered by Initial Teacher Training Institutions (Bericht) → Kapitel 4 bis 4.5
<https://www.nfer.ac.uk/publications/EOT01/EOT01.pdf>
- 4.2 Backman, E. (2008) What is valued in friluftsliv within PE teacher education?—Swedish PE teacher educators' thoughts about friluftsliv analysed through the perspective of Pierre Bourdieu, *Sport, Education and Society*, 13:1, 61-76,
<https://doi.org/10.1080/13573320701780522>
- 4.3 Barrable, A. & Lakin, L. (2020) Nature relatedness in student teachers, perceived competence and willingness to teach outdoors: an empirical study, *Journal of Adventure Education and Outdoor Learning*, 20:3, 189-201,
<https://doi.org/10.1080/14729679.2019.1609999>
- 4.4 Blatt, E. & Patrick, P. (2014) An Exploration of Pre-Service Teachers' Experiences in Outdoor 'Places' and Intentions for Teaching in the Outdoors, *International Journal of Science Education*, 36:13, 2243-2264,
<https://doi.org/10.1080/09500693.2014.918294>
- 4.5 Bore, A. (2006). Creativity, Continuity and Context in Teacher Education: Lessons from the Field. *Australian Journal of Environmental Education*, 22(1), 31-38.
<https://doi.org/10.1017/S0814062600001634>
- 4.6 Carrier, S.J. The effects of outdoor science lessons with elementary school students on preservice teachers' self-efficacy. *J Elem Sci Edu* 21, 35–48 (2009).
<https://doi.org/10.1007/BF03173683>
- 4.7 Derman, A., Sahin, E., & Hacieminoglu, E. (2016) Does Outdoor Education Make Any Difference in Environmental Literacy of Pre-Service Classroom Teachers? *International Journal of Environmental and Science Education*, v11 n15 p8491-8506.
http://www.ijese.net/makale_indir/IJESE_1098_article_57f64a4e4fd5f.pdf

- 4.8 Höper, J., & Köller, H.-G. (2018). Outdoor chemistry in teacher education – a case study about finding carbohydrates in nature. *LUMAT: International Journal on Math, Science and Technology Education*, 6(2), 27–45.
<https://doi.org/10.31129/LUMAT.6.2.314>
- 4.9 Karadağ, S. Ç. (2019). Psychosocial Achievements of Social Studies Teacher Candidates in Outdoor Geography Courses. *Review of International Geographical Education Online (RIGEO)*, 9(3), 663-677.
<https://rigeo.org/wp-content/uploads/2021/05/10.33403-rigeo.580824-936336.pdf>
- 4.10 Petra Lindemann-Matthies , Costas Constantinou , Hans-Joachim Lehnert , Ueli Nagel , George Raper & Chrysanthi Kadji-Beltran (2011): Confidence and Perceived Competence of Preservice Teachers to Implement Biodiversity Education in Primary Schools—Four comparative case studies from Europe, *International Journal of Science Education*, 33:16, 2247-2273
<https://doi.org/10.1080/09500693.2010.547534>