

Annexe au blog: «Cinq bonnes raisons pour favoriser un enseignement à l'extérieur»

Bases scientifiques – études et méta-analyses

Kuo et al. (2019): Do experiences with nature promote learning?

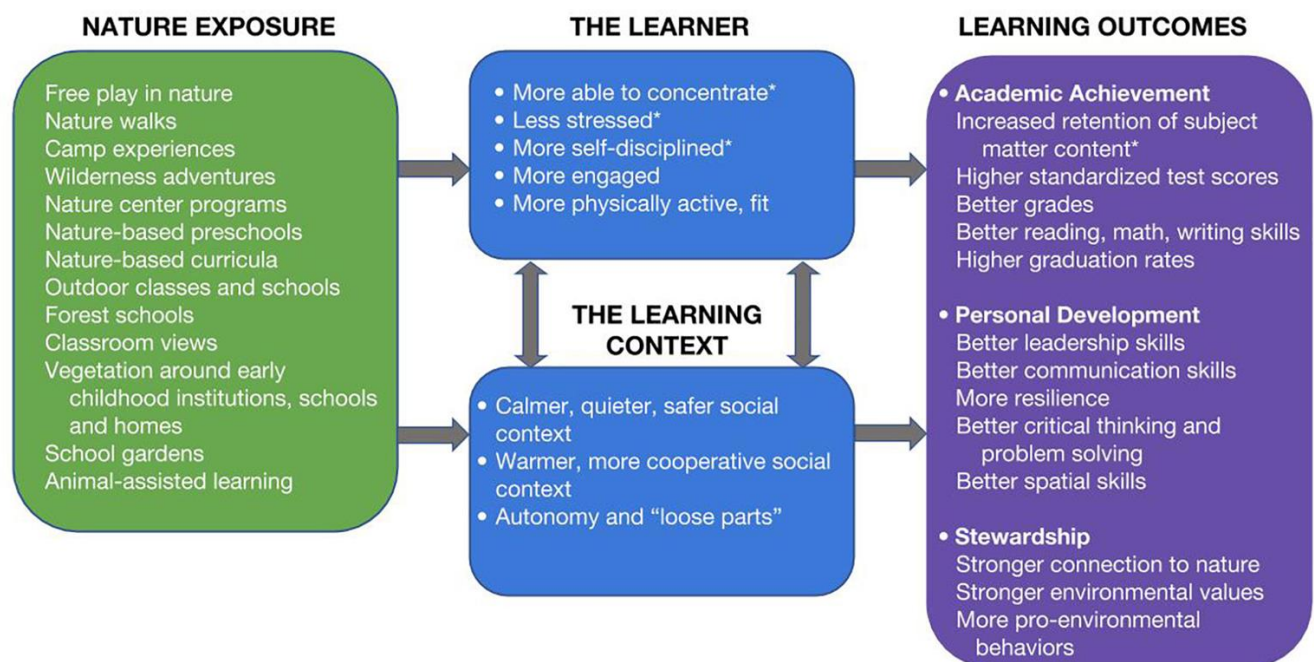


FIGURE: Nature-based learning: exposures, probable mechanisms, and outcomes. This Figure summarizes the state of the scientific literature on nature and learning.

Méta-analyses de chercheurs sur la thématique Enseigner dehors / lien enfants-nature

Hartig, T., Mitchell, R., De Vries, S. & Frumkin, H. (2014): Nature and Health. *Annual Review of Public Health* 35, pp 207-228.

Kuo M., Barnes M. and Jordan C. (2019): Do Experiences With Nature Promote Learning? Converging Evidence of a Cause-and-Effect Relationship. *Frontiers in Psychology*, 10:305.

Malone, K. & Waite, S. (2016): Students outcomes and natural schooling. Pathways from evidence to impact report 2016. Plymouth University.

Nilsson, K., Bentsen, P. Grahn, P. & Mygind, L. (2019): De quelles preuves scientifiques disposons-nous concernant les effets des forêts et des arbres sur la santé et le bien-être humains? *Santé Publique*, 1, pp 219-240.

Raith, A. & Lude, A. (2014): Startkapital Natur. Wie Naturerfahrung die kindliche Entwicklung fördert. Oekom.

Mirrahimi, S., Tawil, N.W.; Abdullah, N .A.G., Surat, M. & Usman, I.S.M. (2011): Developing Conducive Sustainable Outdoor Learning: The Impact of Natural environment on Learning, Social and Emotional Intelligence. *Procedia Engineering* 20, pp 389 – 396.

Autres études

Chawla, L. (2009): Growing up green: Becoming an agent of care for the natural world. *Journal of Developmental Processes*, 4, pp 6-23.

Kuo M., Browning M.H.E.M. & Penner M.L. (2018): Do Lessons in Nature Boost Subsequent Classroom Engagement? Refueling Students in Flight. *Frontiers in Psychology*, 8:2253.

Wells, N. & Lekies, K. (2006): Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism. *Children, Youth and Environments* 16, pp 1-24.

Projet TEACHOUT, Université de Copenhague

The overall aim of the TEACHOUT project is to generate knowledge about the strengths and weaknesses of practicing udeskole, compared to mainstream education. Udeskole (or EotC, Education outside the Classroom) is a broad term referring to curriculum-based teaching outside of school in natural as well as cultural settings on a regular basis.

Bølling, M., Niclasen, J., Bentsen, P., & Nielsen, G. (2019). Association of Education Outside the Classroom and Pupils' Psychosocial Well-Being: Results From a School Year Implementation. *Journal of school health*, 89 (3), 210-218.

Bølling, M., Otte, C. R.1, Elsborg, P., Nielsen, G., & Bentsen, P. (2018). The association between education outside the classroom and students' school motivation: Results from a one-school-year quasi-experiment. *International Journal of Educational Research*, 89, 2235.

Mygind, L.; Stevenson, M.P.; Liebst, L.S.; Konvalinka, I.; Bentsen, P. (2018) Stress Response and Cognitive Performance Modulation in Classroom versus Natural Environments: A Quasi-Experimental Pilot Study with Children. *Int. J. Environ. Res. Public Health*, 15, 1098.

Otte, C. R., Bølling, M., Stevenson, M. P., Ejbye-Ernst, N., Nielsen, G., & Bentsen, P. (2019). Education outside the classroom increases children's reading performance:

Results from a one-year quasi-experimental study. *International Journal of Educational Research*, 94, 42-51.

Otte, C. R., Bølling, M., Elsborg, P., Nielsen, G., & Bentsen, P. (2019). Teaching maths outside the classroom: does it make a difference? *Educational Research*, 61 (1), 38-52.

Schneller, M.B., Duncan, S., Schipperijn, J., Nielsen, G., & Mygind, E., & Bentsen, P. (2017). Are children participating in a quasi-experimental education outside the classroom intervention more physically active? *BMC Public Health*, 17(1), 523.

TEACHOUT 2 (in work) studies the efficacy, mechanisms and mediators of education outside the classroom interventions on pupils' learning and wellbeing.

Compétences clés du 21^e siècle

Lamry, J. (2018) : Les compétences du 21^{ème} siècle. Comment faire la différence? Créativité, Communication, Esprit Critique, Coopération. Malakoff: Dunod.

UNESCO (2014) : Principes directeurs sur l'apprentissage au 21^{ème} siècle. Genève: Bureau International d'Education.

World Economic Forum (2016): *New Vision for Education: Fostering Social and Emotional Learning through Technology*. Geneva: World Economics Forum.