Special issue
The lesson learned:
What we have learned
from the pandemic
and how to innovate
schools and universities
in order to overcome it

Edited by
Graziano Cecchinato
(University of Padua)
& Juan González-Martínez
(University of Girona)

Index

Children's digitally mediated perezhivanie/enchantment in backyard excursions to "nature"

Peter Renshaw*, Kirsty Jackson*, Harriet Mortlock**, Ron Tooth**

Abstract

We examine children's digitally mediated excursions to "nature" in their backyards when Covid-19 prevented environmental excursions. The data consists of young children's accounts of their backyard excursions recorded on digital devices and posted online to *Seesaw*. We use sociocultural theory to analyse the co-agency of child and the digital device, the unit of analysis being "a child-using-a-digital-device". To theorise experience, we deploy Vygotsky's concept of perezhivanie and Bennett's notion of enchantment. The analysis of posts to Seesaw revealed children's experience of vivid, emotionally engaging moments with "nature", and evidence of an ethic of care. We conclude that emotionally engaging pedagogies based on perezhivanie/enchantment are important in addressing current environmental crises.

Keywords: Enchantment; Perezhivanie; Pedagogy; Digitally Mediated Agency; Nature

 * University of Queensland, Australia. Peter Renshaw, orcid: 0000-0002-2052-2055; Kirsty Jackson, orcid: 0000-0002-8535-2368.
 ** Pullenvale Environmental Education Centre, Qld., Australia.
Corresponding author: p.renshaw@uq.edu.au

Introduction

Covid-19 interrupted conventional schooling across the world with 90% of students in 165 countries (1.5 billion students) experiencing major disruptions to their learning (UNICEF, 2020; Spiteri, 2020). School closures and the policies of confinement and social distancing affected almost every aspect of children's lives (OECD, 2020). An unexpected effect of Covid-19 was a "turn to nature" as adults and children sought activities outdoors to cope with social restrictions. This "turn to nature" is the focus of the current paper. We acknowledge that "nature" is a problematic concept as it implies an ontological distinction between humans and other animals, and the separation of humans from the material world. We adopt a relational and non-hierarchical ontology in our research (Taylor & Pacini-Ketchabaw, 2015; Tooth & Renshaw, 2020), so "nature", "human", and "matter" are regarded as entangled, relational, and emergent properties of being and knowing. We decided to refer to "nature" here because it is the term used in public discourse and research literature examining the effects of Covid-19 on the well-being of children and adults.

Researchers in a number of countries documented a "turn to nature" associated with the Covid-19 restrictions. In Norway, Venter et al. (2020) reported a three-fold increase in outdoor activities such as walking, jogging and cycling, especially in remote forest areas. Morse et al. (2020) found in the USA that Covid-19 led to an increase in outdoor activity such as gardening, walking, photography, and art, relaxing alone outside, and watching wildlife. Richardson and Hamlin (2021) found in the UK that "nature connectedness" and "time in nature" were both significant predictors of a person's wellbeing and pro-nature conservation behaviours. In Australia, people doubled the time they spent walking, running or cycling in public green spaces (Stokes, 2020). Longitudinal studies of children's exposure to outdoor environments in four European countries (Spain, Netherlands, Lithuania and UK), indicated that those with low levels of exposure to "nature" in childhood had poorer mental health as adults (see Preuß Nieuwenhuijsen et al., 2019). Researchers such as Spiteri (2020, 2021)

advocated for more creative, innovative and flexible pedagogies during Covid-19, including more child-initiated learning such as investigating "nature" in their backyards.

In this paper, we explore how digital technologies mediated children's turn to "nature" in their own backyards when face-to-face excursions to environmental education centres were cancelled due to Covid-19. The context of our investigation is Pullenvale Environmental Education Centre (PEEC) in Brisbane, Australia. Co-authors, Ron Tooth and Harriet Mortlock, are respectively Principal and Teacher at PEEC. The environmental education excursions at PEEC are designed to engage children in multiple firsthand experiences with "nature" using a narrative-based approach. As they explore different natural sites such as a creek or forest or garden, children role-play different characters (depending on the excursions) such as "a nature detective" or "an entomologist" or "an environmental advocate" or "bush kid". During Covid-19, however, these experiential place-based excursions were not possible. It was necessary to redesign the excursions so that children's backyards became the site of experiences in "nature", and digital technologies became crucial as the mediating tools of the backyard experiences. Using the online platform, *Seesaw,* PEEC staff created different nature-related activities for children to try-out in their own backyards or immediate neighbourhoods. Children were encouraged to share their experiences with teachers and peers by posting video- and audio-recordings and photographs to *Seesaw.*

Prior to Covid-19 the teachers at PEEC, like other environmental educators, were sceptical about the benefits of digital devices in connecting children to "nature" (see Greenwood & Hougham, 2015; Smith & Sobel, 2010). Digital devices can interfere with children becoming aware of, and appreciating the natural environment around them. During some excursions, for example, PEEC staff observed children playing games on mobile phones and checking social media posts. At other times, however, they observed children using digital devices to connect to the natural world imaginatively and emotionally by taking close-up digital images of fungi and lichens or capturing the intricate tracks left by moth larvae on a

scribbly-gum tree. Reflecting on the affordances of digital technologies to amplify and preserve key experiences during environmental excursions, we began researching how children use digital devices to record special moments of connection between themselves and "nature" (see Renshaw, Tooth & Kumpulainen, 2019). The research project began prior to Covid-19, but when children were confined to their homes and immediate neighbourhoods, digital technologies and online platforms became the crucial mediators of the "nature" excursion for children.

Theorising children's digitally mediated experiences in/with "nature"

We draw upon sociocultural theory to conceptualise digital technologies as tools that mediate children's learning in "nature" (Fleer, 2019; McLay Renshaw Phillips, 2017; Werstch, Tulviste & Hagstrom, 1993). A child-using-a-digital-device relates to "nature" through the affordances of the device. For example, the child-using-a-digital-device selectively *frames* specific objects or events for attention; the *zoom* function (zooming-in/zooming-out) can signal the relative importance of an object or feature in the scene, and it allows micro details or the broader context of an experience to be explored; and the *recording* function freezes time and activity, that is, particular moments or episodes are captured and can be shared and discussed with others. In summary, digital devices mediate and transform not only children's experiences of "nature", but also how the experiences are recalled, re-represented and communicated.

What do we mean by "experience?" We have begun to theorise children's experiences in "nature" using two different but compatible theoretical approaches: Lev Vygotsky's (1934/1994) notion of perezhivanie; and Jane Bennett's (2001) notion of enchantment. In proposing the concept of perezhivanie (emotional lived experiences), Vygotsky sought a unit of analysis that avoided the person-context dichotomy and captured learning as a cognitive, emotional and embodied event (Roth & Jornet, 2016). Perezhivaniya are events that are

significant in a person's life, specific events that can be recalled and reconsidered across time (Blunden, 2016; Ng & Renshaw, 2019). We have deployed perezhivanie for a number of years to analyse children's recollections and reflections on their experiences during "nature" excursions (Renshaw 2021; Renshaw & Tooth, 2016; Ramos & Renshaw, 2017; Tooth & Renshaw, 2020). We've found that during and after excursions, children report strong emotions, new insights about "nature" and new aspirations for their futures. Perezhivanie provided the theoretical framework to capture this complex, multifaceted form of learning in/about "nature".

The concept of enchantment was proposed by Jane Bennett (2001) to critique the assumption within the field of sociology that modern societies inevitably produce disenchanted, alienated citizens who lack care and connection to the places where they live. Bennett (2001) argued that focusing solely on social alienation ignored the occurrence of enchanting experiences, moments of surprise and wonder where people are suddenly emotionally receptive to an experience in place. As Pyyry and Aiava (2020) noted, "From this point of view, enchantment triggers generosity for all life's complexity, and is therefore an important resource for ethical being… a dull or cynical take on life will not produce care for the world (p.583). There are clear similarities between perezhivanie and enchantment in highlighting the significance of specific emotional experiences in a person's life. What Bennett's notion of enchantment adds to perezhivanie is more explicit recognition that "we cannot care for what we do not love" (Alexander & Gleeson, 2020, p. 200). That is, enchantment highlights the connection between emotional lived experiences and the adoption of an ethic of care. Perezhivanie, on the other hand, has more direct implications for educators. By proposing that emotional experiences are relived and re-represented over time, Vygotsky's theory points to the design of pedagogies that are emotionally engaging and enable reflection upon and re-representation of experiences. Indeed, the professional work of PEEC teachers has centred on designing pedagogies that emotionally engage children in "nature" and enable them to reflect on and represent their experiences in multimodal ways.

Research Context and Methods

The data analysed in this paper were collected as part of a 3-year longitudinal research project on children's perezhivaniya in "nature" (Renshaw Tooth & Kumpulainen, 2019). The project involves two cohorts of primary school children drawn from 4 different schools in Brisbane: the first cohort of 32 children (8 children per school) were in Year 4 (9 – 10 years old) in 2019; the second cohort were 32 children in the Preparatory Year in 2019 (5 – 6 years old). In 2019, the data were collected during an environmental excursion conducted by PEEC for each cohort. Ethnographic methods of data collection were used, including participant observation of children during the excursion, interviews during and after the excursion, and collection of digital artefacts.

In early 2020, as schools were closed and excursions cancelled due to Covid-19 restrictions, we had to adopt a different research plan and adapt our methods of data collection. An online version of the PEEC excursion called *Nature Detective* was devised, and children were invited to investigate nature in their backyard (or neighbourhood) by being observant and attentive to the trees, scrubs, insects, birds and other animals they might encounter. Children were asked to post accounts of their experiences to *Seesaw* using photos, videos, audio-recordings or other multi-modal texts that conveyed how they were becoming nature detectives in their backyards. *Seesaw* posts were accessible to the teacher, to parents and to the other children in the class as well as to the research team.

For this paper we have selected for analysis three digital artefacts (Extracts) that children posted to *Seesaw* in second term of 2020. The children attended one of the four schools in the research project. This school serves a community on the edge of Brisbane where families typically live in free-standing houses with trees, gardens and play equipment in the backyard. The teachers at this school were very supportive of the online backyard excursions and encouraged children to share their experiences online.

Research Questions

Two research questions are addressed: (i) how digital technologies mediated children's connection to "nature" in their backyard; and (ii) what features of children's posts to Seesaw are indicative of their perezhivanie and enchantment in the backyard. The indicators of perezhivanie and enchantment include the expression of emotions, vivid description of particular moments, exhibiting care for "nature", and comments that connect the present moment with the child's past and future. Although it is defined as a specific emotional event, a key feature of perezhivanie is the entanglement of the present experience with events and relationships from the child's past and their foreshadowing of the future (see Ramos & Renshaw, 2017).

Results

Digital mediation of children's connection to "nature"

The children utilised digital technology to post various types of texts to Seesaw. Some were *recounts* of experiences in/with "nature" as they talked to camera (see Extract 1 below). The digital device afforded children with a sense of audience as they recounted a story about a specific event that seemed interesting and worth sharing. Children also posted *live tours* of their backyard (see Extract 2 below). A key aspect of both Extracts 1 and 2 is the agency enabled by the child-using-a-digital-device. The digital device was a partner, a co-agent, in the production of these recounts and live tours. This co-agency is revealed vividly in Extract 2 where Rosie conducts a live tour of her backyard. She searches for particular objects while looking at the screen of the iPad, and zooms in to capture a specific object (flower bud) that she wanted to show us (her virtual audience). As we elaborate below, these experiences have features consistent with perezhivanie and moments of enchantment. We suggest that these emotional lived experiences arose from the co-agency of the child-us-

ing a digital device. That is, the digital technologies were active mediators of children's perezhivanie/enchantment.

Extract 1: Rosie's recount of finding and releasing a gecko

Rosie is recording to camera as she describes a gecko she found inside her house.

"Hello Mrs Green. I wanted to tell you a few nights ago I found this little gecko and I picked it up and I got a photo of it and I put him outside and I have seen lots of nature around my garden and um my sister is doing lots and lots and lots of things she is telling my mum and dad how what we need for our ingredients in our dinner. I am going to make up a new nature song soon and I hope everything is okay. Bye!"

In Extract 1, Rosie conveys a strong sense of her agency through the use of the authorial "I" seven times. Rosie performs as the director and script-writer as she partners with the digital camera to record the short story. There is also an ethic of care conveyed by her description of capturing and releasing the gecko into her backyard. By taking a photo, Rosie has ensured that the gecko remains a material presence in her life. By sharing her experience with Mrs Green via Seesaw, she has created the opportunity for on-going dialogue about that gecko and geckos in general. Even though Covid-19 prevented face-to-face interaction, digital technology created an intimate space for sharing experiences between Rosie and her teacher. It is this combination of a notable experience per se (capturing and releasing the gecko) and sharing it with a significant person in Rosie's life (her teacher) that suggests it can be regarded as a perezhivanie. As explored further in Extract 2 below, her perezhivanie is not a static experience from the past. Rosie shifts across timescapes in her recount of the gecko story. She is recounting an event from the past ("a few nights ago"), describing the present ("my sister is telling my mum and dad") and foreshadowing the future ("I am going to make up a new nature song"). Her perezhivanie entails emotions associated with the entanglement of these past-present-future events.

Extract 2: Rosie's emotional timescape and landscape of her backyard.

In this Extract Rosie takes an iPad outside and gives her online audience a live tour of her backyard.

"Today I am coming out to my backyard and I am wearing my Mummy's shoes because I couldn't find mine and I am going up in my backyard today, see. It is a very nice place and the sun is coming through the clouds. Today I am trying to show you my backyard, I have lots of trees and flowers and if you come over here you will see something special to our house (pause) it is finally growing back. See, the little flower plant over there, just let me find it (points iPad to tree) I don't think it is there (pause) oh wait there it is! (Walks with iPad facing different tree) Right there, see that beautiful flower (zooms in up close to flowers). And over there I have my playground, it is very very special and I have some friends over there (pointing the iPad at the neighbour's fence). They are very indeed special friends. I can't wait to show you one of my best friends (friend isn't there). See you later everyone, have a good weekend, bye!"

Rosie's backyard is a place of perezhivaniya, of emotional lived experiences, that have temporal and spatial features. With regard the temporal dimension, Rosie's account entangles the past, the present and the future. We hear her reference the *past* when she says of the special flower, "it is *finally* growing back". This phrase conveys her attentiveness to the cycles of "nature" as seasons change and flowers bud and fade. We are given a snap-shot of the *present* when she says, "and the sun is coming through the clouds". It is easy to imagine the sunlight streaming into her backyard at that moment illuminating the scene. The *future* is also entangled in the experience as Rosie says, "I can't wait to show you one of my best friends." Although the friend is absent Rosie assures us that the friend will be there in the future. Her perezhivanie is not a moment in time in her backyard, but an entangled past-present-future experience. Her experience in the backyard is inflected with emotions arising from this entangled *timescape*.

With regard to the spatial dimension, Rosie isn't objectively rendering the physical space and its contents. Rather, we are taken on a journey with Rosie following the emotional map of her backyard. It is depicted as a special place for the whole family ("you will see something special

to *our* house"). It is imbued with strong positive emotions conveyed by words such as "very nice", "beautiful", "special" and "best". Rosie leads us through the space ("and if you come over here") pointing out things she cares about, such as the "beautiful flower" ("oh wait, there it is") and her special friends ("I have some friends over there"). Digital technologies (iPad and Seesaw) mediate our journey with Rosie enabling us to appreciate the care that she harbours for the special flowers (zooming-in) and the absent friends who she searchers for with the iPad.

As well as temporal and spatial features, perezhivaniya have the double-sided quality of being personal (the experience per se) and socialised (relived and retold). These two aspects of perezhivanie are highlighted in Rosie's account. The account is about her personal emotional landscape but in the process of communicating the experience via digital technologies, she transforms the personal into the social by making private moments accessible to others through cultural tools of communication and representation.

Extract 3: Adam cares for a spider in his backyard.

In this Extract Adam (A in the Extract) is in his backyard exploring "nature" with his mother (P in the Extract) and sister (S in the Extract). The interaction begins with Adam's mother scaffolding his exploration but it changes mid-episode when Adam assumes control of the camera and leads them to see the spider's web.

A: *We saw, so far we have seen a bee, a spider and the bee was eating the wattle.*

P: *Show us the wattle, where is the wattle? Show us up close.*

A: Shows wattle to camera.

P: *Why do you think the bee would like that wattle?*

A: *Because it smells good.*

P: *What does it smell like?*

A: *It kind of smells like leaves.*

P: *Do you think it smells a little bit like honey?*

A: *It smells good but the bee would like it* (holding wattle blossom and inspecting it).

P: *Okay, so where are we going to go now?*
A: *We are going to go further into the bush, going this way.*
A: A leads parent and little sister.
A; *So far, I just found another spider web. This is the spider web, right here.*
S: Little sister uses a net to try and catch spider and A stops her from doing so.
P: *I wonder what sort of spider would have spun that messy web?*
A: *And very sticky too. And this web, people can't see it and they think oh it's just floating from the gravity and then they walk into it and they will be like ahhh!*

Initially the camera is deployed by the mother to frame what can be seen and what is excluded – it becomes a tool for limiting and focussing Adam's attention. However, mid-episode the mother cedes control to Adam ("Okay, so where are we going to go now?"). Adam leads his mother and sister towards a spider web and prevents his sister from harming the web or spider. In that moment, Adam's backyard is a site of pedagogy between brother and sister, as they contest how spiders and their webs should be treated. Adam knows where spiders live, noting for example, *"I just found another spider web. This is the spider web right here… people can't see it and they think oh it's just floating from the gravity…"* Unlike other "people", Adam presents himself as aware and attentive to spiders. Bennett (2001) proposed that enchantment provides the warrant for caring about the places we live. Adam's keen observations and knowledge about spiders provides the basis for his protective action and in turn presents him as a person who cares and acts. Posting this episode to Seesaw communicates to others Adam's identity as a caring person who is prepared to take action to protect "nature", even if it is a spider ("ahhh!").

Conclusion

In our analysis of the children's posts, we searched for evidence of perezhivanie and enchantment, by noting the expression of emotions, description of vivid moments, temporal and spatial entanglements,

and the transfer of experience from the personal (private) to social-ised (public) sphere. These indicators are consistent with research by other scholars such as Ferholt (2015) who highlighted the emo-tional, temporal, social and intersubjective features of perezhivanie. If perezhivaniya are emotional experiences that involve relationships with others, including relationships with human and more-than-hu-man others, then ethical considerations are necessarily implicated. By drawing upon both perezhivanie and enchantment we were able to draw out more explicitly this ethical dimension and identify more clearly the importance of fostering emotional connection to place as central to adopting an ethic of care and committed action, as shown in Adam's action to care for the spider, and Rosie's action of capturing and releasing the gecko.

When children used digital devices to record and post experi-ences, the devices became a partner in the creation of the multimod-al texts – co-agents. This is illustrated by Rosie in Extract 2 where she uses the affordances of the device to create an emotional map of her backyard. We suggest that her perezhivanie in the backyard was enabled by the technology. She isn't recalling an emotionally charged experience but creating that experience with the digital device as she maps her backyard. She has to be clear, concise and selective in creating the digital artefact to post to Seesaw and this constraint enables her to distil the most emotionally charged fea-tures of the backyard. She deploys the functions of the device in this process of distilling and highlighting, and in the process creates this episode of perezhivanie.

The young children in this study are children of the Anthropo-cene (Malone, 2018; Renshaw, 2021) and it is their future that is being disrupted not only by Covid-19, but by the crises caused by climate change, species extinction and displacement of human populations. In this context, we suggest that pedagogies based on perezhivanie and enchantment are more important than ever, not simply because won-der and fascination are worthwhile experiences per se, but because as Bennett (2001) has argued, enchantment provides the basis for an ethic of caring and committed action.

References

Alexander, S., & Gleeson, B. (2020). Rewilding the suburbs: CERES as a site of enchantment. In S. Alexander & B. Gleeson (Eds.), *Urban awakenings: Disturbance and enchantment in the industrial city* (pp. 199-209). Springer Singapore.

Bennett, J. (2001). *The enchantment of modern life.* Princeton University Press.

Blunden, A. (2016). Translating *perezhivanie* into English. *Mind, Culture, and Activity, 23*(4), 274-283.

Ferholt, B. (2015). Perezhivanie in researching playworlds: Applying the concept of perezhivanie in the study of play. In S. Davis, B. Ferholt, H. Grainger Clemson, S. M. Jansson & A. Marjanovic-Shane (Eds.), *Dramatic Iinteractions in Education: Vygotskian and Sociocultural Approaches to Drama, Education and Research* (pp. 57-75). Bloomsbury.

Fleer, M. (2019). Digitally amplified practices: Beyond binaries and towards a profile of multiple digital coadjuvants. *Mind Culture and Activity, 26*(3), 207-220.

Greenwood, D., & Hougham, R. (2015). Mitigation and adaptation: Critical perspectives toward digital technologies in place-conscious environmental education. *Policy Futures in Education, 13(*1), 97-116.

Malone, K (2018). *Children in the Anthropocene Rethinking sustainability and child friendliness in cities.* Palgrave MacMillan.

Mclay, K., Renshaw, P., & Phillips, L. (2017). iBecome: iPads as a tool for self-making. *International Journal of Educational Research, 84,* 68-78.

Morse J., Gladkikh T, Hackenburg D., & Gould R. (2020). COVID-19 and human-nature relationships: Vermonters' activities in nature and associated nonmaterial values during the pandemic. *PLoS ONE 15*(12): e0243697. https://doi.org/10.1371/journal.pone.0243697.

Ng, C., & Renshaw, P. (2019). An Indigenous Australian student's perezhivanie in reading and the evolvement of reader identities over three years. *Learning, Culture and Social Interaction, 22*, 1-10.

OECD. (2020). Combatting covid-19's effect on children. Updated 11th August 2020. https://www.oecd.org/coronavirus/policy-responses/combatting-covid-19-s-effect-on-children-2e1f3b2f/.

Preuß, M., Nieuwenhuijsen, M., Marquez, S., Cirach, M., Dadvand, P., Triguero-Mas, M., Gidlow, C., Grazuleviciene, R., Kruize, H., & Zijlema, W. (2019). Low childhood nature exposure is associated with worse mental health in adulthood. *International Journal of Environmen-*

tal Research and Public Health, *16*(10), 1809. https://doi.org/10.3390/ijerph16101809.

Pyyry, N., & Aiava, R. (2020). Enchantment as fundamental encounter: Wonder and the radical reordering of subject/world. *Cultural Geographies, 27*(4) 581-595.

Ramos, M., & Renshaw, P. (2017). The contours of perezhivanie: Visualising children's emotional experiences in place. *Cultural-Historical Psychology 13*(1) 105-128.

Renshaw, P. (2021). Feeling for the Anthropocene: *Placestories* of living justice. *Australian Educational Researcher, 48*, 1-21.

Renshaw, P., & Tooth, R. (2016). Perezhivanie mediated through narrative place-responsive pedagogy. In A. Surian (Ed.), *Open spaces for interaction and learning diversities* (pp. 13-23). Sense Publishers.

Renshaw, P., Tooth, R., & Kumpulainen, K. (2019). *Digital mediation of children's interaction with the more-than-human-world*. Australian Research Council Discovery Grant (DP190102067).

Richardson, M., & Hamlin, I. (2021). Nature engagement for human and nature's wellbeing during the corona pandemic. https://doi.org/10.1108/JPMH-02-2021-0016.

Roth, W.-M., & Jornet, A. (2016). Perezhivanie in the light of the later Vygotsky's Spinozist turn. *Mind Culture and Activity, 23* (4), 315-324.

Smith, G., & Sobel, D. (2010). Bring it on home. *Educational Leadership, 68*(1), 38-43.

Spiteri, J. (2020). Assessing the usefulness of outdoor learning in the early years during the COVID-19 pandemic in Malta. *Malta Review of Educational Research, 14*(2), 141-161.

Spiteri, J. (2021). Quality early childhood education for all and the Covid-19 crisis: A viewpoint. https://doi.org/10.1007/s11125-020-09528-4.

Stokes, R. (2020). *Sydneysiders take to green space during the covid-19 pandemic.* Media Release, N.S.W. Minister for Planning and Public Spaces, 29th June.

Taylor, A., & Pacini-Ketchabaw, V. (2015). Learning with children, ants, and worms in the Anthropocene: towards a common world pedagogy of multispecies vulnerability. *Pedagogy, Culture & Society, 23*(4), 507-529.

Tooth, R., & Renshaw, P. (2020). Children becoming emotionally attuned to "nature" through diverse place-responsive pedagogies. In A. Cutter-Mackenzie-Knowles et al. (Eds.), *Research Handbook on Childhood nature*, Springer International Handbooks of Education, https://doi.org/10.1007/978-3-319-67286-1_77.

UNICEF (April, 2021). *Responding to COVID-19: UNICEF's2020 key achievements.* UNICEF. https://www.unicef.org/media/97306/file/UNICEF%202020%20Key%20Achievements%20EN.pdf.

Venter, Z., Barton, D., Gundersen, V., Figari, H., & Nowell, M. (2020). Urban nature in a time of crisis: Recreational use of green space increases during the COVID-19 outbreak in Oslo, Norway. *Environmental Research Letters*, *15*(10). https://doi.org/10.1088/1748-9326/abb396.

Vygotsky, L. S. (1994/1934). The problem of the environment. In R. van der Veer & J. Valsiner (Eds.), *The Vygotsky reader* (pp. 338-354). Blackwell.

Werstch, J., Tulviste, P., & Hagstrom, F. (1993). A sociocultural approach to agency. In E. Forman, N. Minick &C.A. Stone (Eds), *Contexts for learning: Sociocultural dynamics in children's development* (pp. 336-356). Oxford University Press.