VIDEO JOURNAL OF EDUCATION AND PEDAGOGY (2022) 1–14

VIDEO JOURNAL
OF EDUCATION
AND PEDAGOGY
brill.com/vjep

Visualizing a Common World of Entanglement through Multiple Viewpoints

Visuality Design in and for Education

Anne Myrstad | ORCID: 0000-0002-6271-4936
Associate Professor, Department of Education / KINDknow – Kindergarten Knowledge Centre for Systemic Research on Diversity and Sustainable Futures, The Arctic University of Norway, Tromsø, Norway anne.myrstad@uit.no

Carola Kleemann | ORCID: 0000-0003-1119-5782
Associate Professor, Department of Education / KINDknow – Kindergarten Knowledge Centre for Systemic Research on Diversity and Sustainable Futures, The Arctic University of Norway, Tromsø, Norway carola.b.kleemann@uit.no

Abstract

The authors explore how multiple viewpoints can challenge our habitualised way of viewing and expand the area of thinking about children's outdoor learning. They draw on micro-fieldwork in a Sámi kindergarten in Arctic Norway. There, learning through participation and practical experiences is a traditional strategy in child rearing. This method of learning is currently being transformed in Sámi kindergartens, wherein the goal is to strengthen the Sámi language, identity and culture. The authors' aim is to explore how learning through participation in pedagogical practices could be made visible by employing different viewpoints. They used GoPro* cameras worn on children's bodies, combined with their own gaze, as well as a handheld video camera used by one of the authors. Such a combination of viewpoints allowed gaining an insight into the complex outdoor kindergarten practices. Drawing on Jayne White's polyphonic dialogical approach to video, the authors placed these diverse viewpoints in a dialogue during the process of analysis. These dialogues revealed our pre-defined human-centric view and effected a change in our theoretical approach, from socio-cultural learning theories to new materialist theories, to include the premise that children learn in all interactions and entanglements that they are part of in a socio-material world.

Keywords

visuality design – human-centric-gaze – multiple viewpoints – outdoor – Sámi kindergarten



FEATURE This article comprises a video, which can be viewed here.

 This article is part of the special topic 'Visual Worlds of Education as Research Designs', edited by Åsta Birkeland, Liv Torunn Grindheim and Chang Liu.

1 Introduction

Technological innovations, such as the sturdy, relatively affordable, wearable GoPro* cameras, allow expanding the visual fields in research into early childhood education. In this study, we set out to explore how multiple viewpoints, generated by chest-mounted cameras on children, can challenge the way of thinking about children's outdoor learning experiences in kindergarten. Drawing on Jayne White's polyphonic dialogical approach to video (White, 2016a, 2016b, 2020), the different viewpoints were put into dialogue during the analysis process, which results in a shift in our theoretical approach from social cultural learning theories to new materialist theories. A wearable camera operates as an extension of children's bodily movement (Caton & Hackett, 2019). This allows such cameras to help us see and listen close to the children's moving bodies (Rotas, 2019). These cameras, as an apparatus, simultaneously

serve as a performative agent, with its own agency (Barad, 2007). What is captured through the lens is what constantly appears in front of it, without recording focus. In this study, we explore how the lack of recording focus in multiple viewpoints challenges and disrupts our *human-centric gaze* (Caton & Hackett, 2019; Harwood & Collier, 2019) during outdoor learning.

We draw on micro-fieldwork on outdoor activities in a kindergarten. In general, for a Sámi kindergarten, being outside, building a campfire and gathering berries are considered culturally and situationally aware activities. As participant observers, we were inspired by the 'deep hanging out' method (Powell & Somerville, 2018, p. 850), which entails waiting for the children to take the initiative to invite us to play, to move together with them, to have conversations with them and so on. We strived to have respectful encounters with the children and staff and to value their contributions. We also followed ethical procedures and sought to show sensitivity regarding when and where to record. Learning through participation and practical experiences is a traditional strategy in Sámi communities and child rearing (Balto, 1997, 2005). This method of learning is currently being transformed in Sámi kindergartens to strengthen Sámi language, identity and culture in an institutional setting (Norwegian Ministry of Education and Research, 2017; Storjord, 2008). We acknowledge that in the world views of Indigenous Peoples, understandings of concepts such as entanglements (Barad, 2007; de Freitas, 2017) and common worlds (Haraway, 2015; Taylor & Giugni, 2012) have existed and have been maintained outside traditional western science. Therefore, in this study, we combine concepts from the new materialist approach (St. Pierre, Jackson & Mazzei, 2016; Barad, 2007) and from the North Sámi local Indigenous language to think (or 'know') with (Mazzei & Jackson, 2011).

Being aware that place is more than a backdrop for activities and tuning in to the common world experience as entanglements with nature, seem to be similar to how the place we were at is named *meahcci* in North Sámi. *Meahcci* is difficult to translate, it is a place for time-specific tasks (Joks, Østmo & Law, 2020), in our case, this means that berries are ripe at a certain time and place, and this affects how humans and non-humans act and react.

2 Empirical Context

As a result of the assimilation process of *Norwegianisation*, Sámi people have suffered the loss of language and cultural continuation, especially in coastal areas. Therefore, a project called *Strengthening Sámi Language and Culture* was

initiated by the kindergarten under study, and we, as researchers, were invited to join. As researchers, we were expected to confirm and support the development of the ongoing and planned practices to strengthen the Sámi language and culture and place it in an academic context. Our contribution to the project was the technology of GoPro® cameras and observation. Overall, the kindergarten under study was active and bold in allocating resources to the local multi-cultural heritage and traditional multilingualism in the area. Aiming to create their own language and culture model for Indigenous kindergartens in the future, they developed learning materials to maintain their focus and ensure the achievement of language goals for mundane situations, such as having temporary staff members who are not proficient in Sámi. Their views and practices are in line with theories on sustainable language vitalisation in an Indigenous minority language context (Cenoz & Gorter, 2017; Keskitalo, 2019; Keskitalo & Määttä, 2011; Kleemann, 2021). In Sámi kindergartens, the traditional ways of acquiring skills are institutionalised, as they are governed by national plans for early childhood education (Norwegian Ministry of Education and Research, 2017; Storjord, 2008). In some ways, such methods contradict the traditional Sámi views of, for example, learning at one's own pace (Balto & Johansson, 2008).

This study draws on recordings obtained from a GoPro® camera attached to a two-year-old girl as well as a researcher's handheld camera. It was a beautiful, sunny day in early September in the Arctic region of Norway. Blueberries and crowberries were ripe, and the heather was warm. A campfire was made to fry fish patties for lunch. The pedagogical goal was to learn about *muorjemeahcci* (berry field). If we were to visit the same geographical spot another time of the year, it would be another *meahcci*, for example, *muorrameahcci*, a place for collecting firewood. The teachers had prepared material and planned the day outdoors for the children to learn the North Sámi names for different types of berries and heather and for them to identify and pick berries and recognise different types of heather. Then, on the following days, they would make berry muffins, smoothies, juice and jam with these berries. The situated Sámi cultural practices involved gathering around the *dolla* (*campfire*), in addition to the pedagogical goals of learning how to start a fire and keep it burning and learning the appropriate North Sámi words.

3 Our Pre-Defined Human-Centric Gaze

Each of our disciplinary traditions (socio-linguistics and social anthropology) has visual or auditory research origins. We drew on Vygotskyan-inspired learning theories, in which social processes and interactions are important aspects of the learning process. *Fast mapping* is a term that describes word learning, in

which the verbal and social contextualisation of adults are in the foreground (Bloom, 2002). In this paradigm, the process of language acquisition as cultural learning focusses on social encounters (Tomasello, 2003, 2014, 2016). The added value of using multiple cameras was that they were able to provide closer, and more varied access to visual and auditory data. In general, we come from a tradition of 'visualising [the] "other" with our specific ideas about how 'the craft of seeing' can capture and validate our analytical process (White, 2020, p. 6–7), and are moving into an extended gaze.

4 Our Extended Gazes

Generally, the analytical perspective of the community of practice based on social learning theories has extended to common worlds as well as a gaze towards entanglements with the non-human. Through seeing other visual fields where humans are on the outskirts, our ideas of community are disturbed. Taylor and Giugni (2012) explicate common worlds as a conceptual framework to reconceptualise inclusion in early childhood communities. They ask why we separate modes of human collectivity, such as our initial focus on social learning, from other parts of the world (Taylor & Giugni, 2012, p. 110). The notion of common worlds is inclusive in its notion of the more-than-human and focusses on the ways in which our past, present and future are entangled with those of other beings, non-living entities, technologies, elements, discourses, forces and landforms (Myrstad, Hackett & Bartnæs, 2020). Children learn from all the relations they are entangled in: humans, places, the material world and other species. This notion challenges the human-dominant position and represents a shift from human relations to other encounters with which children inter-connect. We find this to be in line with *meahcci*, which is described as a Sámi landscape understanding (Schanche, 2002) in which hunting, harvesting and fishing are integral parts of nature and the culture between humans and animals, countries, weather conditions and different seasons (Kramvig, 2020, p. 100). Over time, people have developed deep respect for all actors living in *meahcit* (plural of *meahcci*): humans, animals, birds and fish (Joks et al., 2020).

5 Changing Gazes

Our focus was initially on community and social interactions, but it then changed to include more complex interactions that also involved culture, nature, cameras and recordings. As illustrations of our changing or disturbed gazes, we selected still images from two recordings; one 12-minute recording

with GoPro* camera on a two-year-old child (Figure 2, 3 and 4), and one handheld camera (Figure 1). The first example, *dolla* (*campfire*), pertained to the different ways of seeing through camera angles and viewpoints: the researcher's camera and the body cameras. The second example, *goappar* (*mushroom*), was to exemplify how pre-defined research questions limited our gaze. We initially chose cuts from the recordings that fitted language research in a human–social interaction and then disregarded the full-length clips as a surplus. Thus, we did not initially perceive that the recording was telling a more entangled story about interactions with the material environment. The environment is not a passive backdrop anymore. These perspectives echo understandings in deep ecology as well as Indigenous philosophy, in which people and nature are regarded as relational beings (Absolon, 2010).

6 Dolla (Campfire)

The common objective in this activity is to make a campfire. The children were encouraged to participate. As seen in the picture obtained from our handheld camera (Figure 1), the children participated in different ways in campfire activities. The most obvious contribution was from the five-year-old child with the cap, who fed the fire with birchbark. A two-year-old child behind the teacher to the left held a stick in her hand, and the children and the teacher talked about how to use *beassi* (birchbark) to keep the flame alive.

Placing this view into a dialogue with the viewpoints from the body camera revealed something else (or more) that our eyes did not see. The two-year-old



FIGURE 1 Dolla (campfire). View from our handheld camera.



FIGURE 2 Dolla (campfire). View from the two-year-old child's body camera.

child sitting on the left-hand side of the teacher in the background and the five-year-old child in front of the picture frame were both wearing body cameras. The still image obtained from the GoPro® camera (Figure 2) shows that both children were using their fingers to tear *beassi* from a log at the same time as *beassi* was pronounced.

Our camera framing (Figure 1) reflects an emphasis on social processes and interactions. This focus is also present in the analysis, in which we tried to map children participating in the campfire activity. The girls' tearing *beassi* while pronouncing the word *beassi* was interpreted as their contribution to the community of practice. The images were chosen to illustrate or confirm the interpretation (White, 2020). Through our extended gaze, a close-up of one of the girl's fingers with the prominent log (Figure 2) brought our attention to something else: the child's entanglement with the material world. It became clear to us that we may have entered into 'common worlds' (Taylor & Giugni, 2012; Taylor & Pacini-Ketchabaw, 2018), where the learner and the environment intra-act and different elements mutually influence each other (Lenz Taguchi, 2010). We became aware of *the entangled sets of practices that must have gone into making these images* (Barad, 2007:360) that make up our material.

7 Goappar (Mushroom)

The next stills (Figures 3 and 4) are from the beginning of the 12-minute recording without recording focus by a body camera attached to a two-year-old girl. She wandered around in the heather, sometimes meeting others, communicating



FIGURE 3 Finding a mushroom. View from the two-year-old child's body camera.

verbally and being met with interest and answers. Two excerpts or cuts were created for a parental meeting to illustrate the outdoor word learning practices in the kindergarten, each for less than a minute. From a socio-linguistic viewpoint, the two excerpts were cut and transcribed with specific attention to language use. This allowed us to focus on the parts of the recording involving verbal language in social settings, mainly the type of communication that the two-year-old child had with another girl and the adults in the kindergarten: precisely the social practices that we, as researchers, were looking for as data and what the teachers needed to justify their pedagogical practices (White, 2016b, p. 477).

We were able to 'see' fast mapping of a word in a cut (Figure 3), because the girl with the body camera ran over to the others (Figure 4) and shared the word *goappar* verbally. We saw and constructed causality from one social encounter to the other. The girl's social and physical entanglements were, however, numerous, and we were able to consider causality or effect differently: '...objectivity in an agential realist sense requires an accounting of the larger material arrangement (i.e. the full set of practices) that is part of the phenomenon investigated or produced' (Barad, 2007:390). The cuts that were created to answer a pre-defined research question, our agenda, narrowed, or even blocked, our vision or indeed actually constructed the practice (White, 2016b:2). For us, applying an extended gaze meant paying attention to the visual surplus (White, 2016b:2), like the video excerpt in Figure 5.

In this recording, this means also seeing the cut-out material between verbal social encounters. The movements and stops in the non-intentional recording



FIGURE 4 Telling others about the mushroom. View from the two-year-old child's body camera.



FIGURE 5 A still from the child-created video. (See here.)

focus of the body camera made us pay attention to the complexity that the girl was entangled in. Language learning is situated in this entanglement with the landscape, the mushrooms, the educators and the two-year-old child's own hand/finger pointing. Using GoPro® also brought to our attention the movements and re-orientations that she made in between her social encounters. The polyphony in this example is not in the several camera viewpoints on this episode, but rather in considering the polyphony that the different cuts make

up: seeing the cuts for the parental meeting compared with the full 12-minute recording.

Visualising in Common Worlds 7

Seeing different visual fields in a dialogue with disciplinary fields can expand our critical and creative thinking and help us go beyond our visual and auditory research traditions. Reflections, re-seeings and dialogues can also expand our thinking to include children's relations and encounters with others, including ourselves and our view through cameras. Gazes based on disciplinary focus/ theory and chosen method affect what is seen and how this is seen as 'data'. In addition, using several cameras that are not operated by us allows extending the gaze beyond habitualised viewpoints and can disturb the understandings of visual empirical research and the very notion of what we see when we see.

The extended gaze made us question the givenness of the material, whether there was an 'objective existence of particular material phenomena' (Barad, 2007, p. 361; Elwick, 2020), to video material and the answers obtained from it. Our initial socio-linguistic analysis (Kleemann, 2021) is an example of views on givenness in material. Rooted in a socio-linguistic tradition, the raw material was transcribed into a data set, 'an objective existence', to provide answers to research questions that are pre-determined (Elwick, 2020; White, 2016b) by socio-linguistic theories on bilingual behaviour. Which parts of the material were treated as a visual surplus (White, 2016a)? Through pondering the givenness of what we had been interested in, the different viewpoints that were gained through the body cameras provided new insights into the surplus or the unfocused recordings. We found that the technology that we used can create visible phenomena that were not visible from an overview camera or from our focus and were, thus, not valued. GoPro® offers a lens to think differently about children's relationships with the world: how their bodies and movements are shaped and how their communication is shaped through their encounters within the socio-material world. Being able to see these encounters demands shifting the focus both in the real world and in the analyses.

White's philosophy over the Bakhtinian 'work of the eye' and adding the 'I' (White, 2016b), understood here as ego, viewpoint and experience, provided us a disturbance to disciplinary thinking. The notion of common worlds (Taylor & Pacini-Ketchabaw, 2018) helped us disturb our preliminary distinction between human societies and natural environments. In addition, the multiple viewpoints brought our attention to the idea of being situated and entangled

with both humans and non-human elements. Notably, socio-linguistic theories are not rooted in these complex entanglements. Rather, evidence for contextual word learning (fast mapping) has been found in de-contextualised test situations, in which researchers expose children to non-words in order to isolate the intended word learning from 'the real world'. Time passes, from 10 minutes to several weeks, between introducing a word and testing the children's understanding of it (Bloom, 2002). The *goappar* and *dolla* examples are considered contextualised word learning. The multiple and non-focused recordings also monitor aspects of the in-between disciplinary interest (visual surplus). How much does being by the *dolla* and peeling your own *beassi* in silence aid word retention? Or, after hearing a word, such as goappar, how much does being surrounded by mushrooms of different kinds in the heather aid word retention? This non-human-dominated space, the entanglements in nature and the in-between human encounters may be where fast mapping and word learning lie. Therefore, the importance of learning the right words, in this context the North Sámi words, cannot be underestimated. However, the context, meahcci, can also be perceived as an agential cultural language teacher if we can ease off our fixed perspective from the human encounters in a community of practice and also acknowledge the more-than-human encounters in common worlds of entanglement.

8 Concluding Remarks

When thinking about design and analysis in early childhood education, theories of learning influence the data collection and the process of analysis (Harwood & Collier, 2019). Dominant social learning theories tend to relate learning exclusively to domains of humanity and a traditional pedagogy in which the educator's intention is to transfer knowledge to the child. Hence, a greater focus on entangled practices can help us go beyond the boundaries of traditional learning practices (Powell & Somerville, 2018). In addition, the GoPro* technology can serve as a tool for identifying these processes. Without recording focus, this technology can help capture a multitude of interactions in which children are entangled.

Funding

This research was funded by the Norges Forskningsråd, grant number 275575.

References

- Absolon, K. (2010). Indigenous Wholistic Theory: A Knowledge Set for Practice. *First peoples child & family review*, *5*(2), 74–87. www.doi.org/10.7202/1068933ar.
- Balto, A. (1997). Samisk barneoppdragelse i endring. Ad notam Gyldendal.
- Balto, A. (2005). Traditional Sámi Child Rearing in Transition: Shaping a New Pedagogical Platform. *AlterNative: An International Journal of Indigenous Peoples*, *1*(1), 85–105. www.doi.org/10.1177/117718010500100106.
- Balto, A., & Johansson, G. (2008). Gal dat oahppá go stuorrola = Hvordan styrke det samiske perspektivet i skolen?: et skoleinitiert forskningsprosjekt ved to skoler/fritidshem i svensk Sápmi (Vol. nr. 1(2008)). Sámi allaskuvla Luleå tekniska universitet.
- Barad, K. M. (2007). *Meeting the universe halfway: quantum physics and the entanglement of matter and meaning.* Duke University Press.
- Bloom, P. (2002). How Children Learn the Meanings of Words. MIT Press.
- Caton, L., & Hackett, A. (2019). Head mounted, chest mounted, tripod or roaming? The methodological potentials of a GoPro camera and ontological possibilites for doing visual research with child participants differently. In N. Kucirkova, J. Rowsell & G. Falloon (Eds.), *The Routledge International Handbook of Learning with Technology in Early Childhood* (pp. 362–376). Routledge.
- Cenoz, J., & Gorter, D. (2017). Minority languages and sustainable translanguaging: threat or opportunity? *Journal of Multilingual and Multicultural Development*, 1–12. www.doi.org/10.1080/01434632.2017.1284855.
- de Freitas, E. (2017). Karen Barad's Quantum Ontology and Posthuman Ethics: Rethinking the Concept of Relationality. *Qualitative inquiry*, 23(9), 741–748. www.doi.org/10.1177/1077800417725359.
- Elwick, S. (2020). Reaching beyond the 'Visual Givens' through Philosophical-Empirical Inquiry. In E. J. White (Ed.), *Seeing the world through children's eyes: visual methodologies and approaches to research in the early years* (Vol. Volume 1) (Visual pedagogies, methodologies, and educational research). Brill Sense.
- Haraway, D. (2015). A CURIOUS PRACTICE. *Angelaki: journal of theoretical humanities*, 20(2), 5–14. www.doi.org/10.1080/0969725X.2015.1039817.
- Harwood, D., & Collier, D. R. (2019). "Talk into my GoPro, I'm making a movie!" Using digital ethnographic methods to explore children's sociomaterial experiences in the woods. In N. Kucirkova, J. Rowsell & G. Falloon (Eds.), *The Routledge International Handbook of Playing and Learning with Technology in Early Childhood* (pp. 49–61(13)). Routledge.
- Joks, S., Østmo, L., & Law, J. (2020). Verbing *meahcci*: Living Sámi lands. *The Sociological review* (*Keele*), 68(2), 305–321. www.doi.org/10.1177/0038026120905473.
- Keskitalo, P. (2019). Place and space in Sámi education. *Policy futures in education*, 17(4), 560–574. www.doi.org/10.1177/1478210319848530.

- Keskitalo, P., & Määttä, K. (2011). Sámi pedagogihka iešvuođat = Saamelaispedagogiikan perusteet = The Basics of Sámi pedagogy = Grunderna i samisk pedagogik = Osnovy Saamskoj pedagogiki. Lapland University Press.
- Kleemann, C. (2021). Pedagogical Translanguaging to Create Sustainable Minority Language Practices in Kindergarten. *Sustainability*, 13(7), 3613. Retrieved from www. mdpi.com/2071-1050/13/7/3613.
- Kramvig, B. (2020). Landskap som hjem. *Norsk antropologisk tidsskrift*, *31*(1–02), 88–102. www.doi.org/10.18261/issn.1504-2898-2020-01-02-08.
- Lenz Taguchi, H. (2010). Going Beyond the Theory/Practice Divide in Early Childhood Education: Introducing an Intra-Active Pedagogy. London: Routledge. www.doi. org/10.4324/9780203872956.
- Mazzei, L. A., & Jackson, A. Y. (2011). Thinking with Theory in Qualitative Research: Viewing Data Across Multiple Perspectives. Taylor and Francis. www.doi. org/10.4324/9780203148037.
- Myrstad, A., Hackett, A., & Bartnæs, P. (2020). Lines in the snow: Minor paths in the search for early childhood education for planetary wellbeing. *Global Studies of Childhood*. www.doi.org/10.1177/2043610620983590.
- Norwegian Ministry of Education and Research. (2017). Framework Plan for the Content and Tasks of Kindergartens. www.udir.no/globalassets/filer/barnehage/rammeplan/framework-plan-for-kindergartens2-2017.pdf.
- Powell, S. J., & Somerville, M. (2018). Drumming in excess and chaos: Music, literacy, and sustainability in early years learning. *Journal of Early Childhood Literacy*, 20(4), 839–861. www.doi.org/10.1177/1468798418792603.
- Rotas, N. (2019). Three Notes on Visual Pedagogies in Childhood Research. *Video Journal of Education and Pedagogy*, 2019,4(1), 9–22. www.doi.org/10.1163/23644583-00401005.
- Schanche, A. (2002). Meahcci den samiske utmarka. *Samiske landskap og Agenda 21 / Svanhild Andersen (red.*), 156–170, 203, 218.
- Storjord, M. H. (2008). Barnehagebarns liv i en samisk kontekst: en arena for kulturell meningsskaping [Universitetet i Tromsø, Det samfunnsvitenskapelige fakultet, Institutt for pedagogikk og lærerutdanning]. [Tromsø].
- St. Pierre, E. A, Jackson, A.Y. & Mazzei, L.M (2016). New Empiricisms and New Materialisms: Conditions for New Inquiry. *Cultural Studies* ↔ *Critical Methodologies*, 16(2) 99–110.
- Taylor, A., & Giugni, M. (2012). Common worlds: reconceptualising inclusion in early childhood communities. *Contemporary Issues in Early Childhood*, 13(2), 108–119. www.doi.org/10.2304/ciec.2012.13.2.108.
- Taylor, A., & Pacini-Ketchabaw, V. (2018). *The Common Worlds of Children and Animals: Relational Ethics for Entangled Lives* (First edition. ed.). Routledge.
- Tomasello, M. (2003). *Constructing a language: a usage-based theory of language acquisition*. Harvard University Press.

- Tomasello, M. (2014). *A Natural History of Human Thinking*. Harvard University Press. Tomasello, M. (2016). Cultural Learning Redux. *Child Development*, 87(3), 643–653. www.doi.org/10.1111/cdev.12499.
- White, E. J. (2016a). More than meets the "I": A polyphonic approach to video as dialogic meaning-making. *Video Journal of Education and Pedagogy*, 1(1), 1–14. www. doi.org/10.1186/s40990-016-0002-3.
- White, E. J. (2016b). A Philosophy of Seeing: The Work of the Eye/T in Early Years Educational Practice. *Journal of Philosophy of Education*, 50(3), 474–489. www.doi. org/10.1111/1467-9752.12158.
- White, E. J. (2020). Seeing the World Through Children's Eyes: Visual Methodologies and Approaches to Research in the Early Years. Boston: Brill.