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Seeing with hands and touching with eyes: recovering sensorial attention to nature in primary schools

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At the heart of the current environmental crisis lies arguably a wider crisis, our loss of ability to perceive ourselves as part of an interconnected living world (Kimmerer, 2013). We contend that, counterintuitively, the digital touchscreens that captivate our children can also help reconnect them with nature. To this purpose, we designed digital haptic experiences for embodied interactions that prime affective dispositions towards the natural world.

Part of a UKRI-funded project (SENSE, **EP/V042351/1**), the study involved 302 children aged 6-12 across 10 primary schools in England and Scotland. Focusing on tactile feedback, indoor activities included direct tactile exploration of natural objects (e.g., feathers, pinecones, leaves) and digital haptic exploration of textures from nature (e.g., tree barks, fur, scales) via newly designed haptic interfaces. These were followed up with outdoor touch-based activities, e.g., designing creatures from clay and natural materials scavenged from the school grounds to observe how textures may be adapted for life within those grounds. Data were collected through photos, audio and video recordings, and observation notes.

Across the study, we found children using touch to make sense of both familiar and unfamiliar objects in new ways, supported by hand and facial gestures, evoking affective memories and leading to new observations and questions. Without prior priming, results also pointed to the complex and significant role of digital haptics in integrating children's exploration of textures with their communication and imaginative abilities, e.g., expressed through the use of over 100 distinct metaphors and 100 tactile

adjectives, that naturally led to further scientific questions (e.g. why are some tree barks rough and others smooth; why are bumblebees furry and why do they buzz?).

We argue that a focus on touch discloses the opportunities for attentionality – as the capacity to ‘pay attention’ – through the intermodality of touch and vision, for “one can literally see with the hands and touch with the eyes” (Paterson, 2007). Emphasising digital and natural touch in science education can thus support interconnectedness with nature and learning about sustainability. In this context, the school environment is offered as a ‘place’ for all children both to learn and belong (Kimmerer, 2013).

Wordcount: 346

References

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