

Cultural Transmission at Nature Kindergartens: Foraging as a Key Ingredient

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Abstract

While nature environments afford food for human consumption, there is a dearth of empirical inquiry that considers foraging as a sustainable, seasonal practice that builds human-nature relations. This gap in the literature is particularly apparent in early childhood education literature. Drawing on observations recorded at two forest-based nature kindergartens in Finland and Scotland, the data illustrate how outdoor learning sites are richly resourced places where foraging practices are mediated by socio-cultural norms. Bourdieu's concept of habitus (1977) is used to consider the ways in which foraging practices, in contrasting early childhood education programs, are hallmarked by "conduit" adults. These adults play a constitutive role in maintaining uncontested, "common sense," quotidian behaviors.

Résumé

Tandis que les environnements naturels fournissent de la nourriture propre à la consommation par les êtres humains, il y a un grossier manque de demandes de renseignements empiriques considérant la culture fourragère comme une pratique durable et saisonnière établissant des liens entre l'humain et la nature. Cet écart dans la littérature est particulièrement évident dans les écrits sur l'éducation des enfants en bas âge. Les données, qui reposent sur des observations consignées dans deux écoles maternelles en forêt situées en Finlande et en Écosse, illustrent à quel point les sites d'apprentissage en plein air sont des lieux riches en ressources où les pratiques fourragères sont assurées par les normes socioculturelles. Le concept d'habitus de Bourdieu (1977) est employé pour envisager les moyens par lesquels les pratiques fourragères, au sein de programmes d'enseignement à l'enfance divergents, sont caractérisées par des adultes dits intermédiaires. Ces adultes jouent un rôle constituant dans le maintien de comportements quotidiens incontestés qualifiés de logiques.

Keywords: foraging, nature kindergarten, situated experience, habitus, human-nature interaction

Introduction

Foraging is a quest—a hunt for wild plants, fish, and other edible resources—characterized by searching, gathering, occasionally cooking, and usually consuming that which is found. Children familiar with foraging tend to live in

subsistence societies where such skills are a necessary part of their existence (Hawkes, O'Connell, & Blurton Jones, 1995). Foraging has gained a footing in anthropology, but is seldom represented in outdoor learning and early childhood literatures. When foraging is considered more generally, it covers a spectrum between survival guides to gourmet recipes, while overlooking socio-cultural influences. Foraging permits food outdoors and culture to unite, or to borrow from Kramer (2011), to taste culture through foraging.

Time spent in natural environments is beneficial in early childhood (Kellert, 2002; McCurdy, Winterbottom, Mehta, & Roberts, 2010). Indeed, distinctive values are noted in using woodlands for learning, in terms of their multi-sensory qualities (Henwood & Pidgeon, 2001), as sites for environmental knowledge and awareness (Bolay & Reichle, 2007; Ridgers, Knowles, & Sayers, 2012), and as sites for improved motor skills and stamina from rough terrain (Fjørtoft, 2004). Further, provisions in these spaces are reported (Knight, 2013; O'Brien & Murray, 2007; Swarbrick, Eastwood, & Tutton, 2004). Still, in Western outdoor learning contexts, where there is no imperative to forage, there is a notable dearth of empirical inquiry that considers these behaviours. Sources do comment on the sensorial aspects of early childhood pedagogy (Johansson & Løkken, 2013), yet discussions of taste and olfactory cues in the outdoor learning literature are rare. Instead, the focus is on specific genres of food-related activities, such as picnicking or campfire experiences, where processed foods are routinely consumed (Ridgers et al., 2012).

Fishing is also overlooked in the literature, which is surprising given the role of fishing in many cultures and its reported benefit to environmental awareness (Cottrell & Raadik-Cottrell, 2010). In relation to the current study, however, a broader perspective must be undertaken—one that neither includes nor excludes fishing in particular, but that is open and responsive to the various forms of foraging that exist. This paper interrogates the concept of foraging with the aim of finding the degree to which it can be considered a valuable educational practice in contemporary early childhood settings.

Nature Kindergartens as Foraging Sites

Nature kindergartens are specialist childcare institutions that, relative to the majority of early childhood institutions, are based in wilder, more untamed sites. Settings are troves rich in nature's resources that facilitate exploration and offer diversity for "treasure hunting" (Kramer, 2011; Lewis-Stempel, 2012), as "you can't just go to your [vegetable] patch and grab it" (Bird, 2014, p. 9). These real settings promote first-hand, season-round, meaningful participation in the "intangible 'utilities' associated with nature and experiencing nature" (Henwood & Pidgeon, 2001, p. 136).

Preschool has been recognized as an important stage in the shaping of beliefs such as environmental attitudes (Basile, 2000). Chipeniuk's (1995) survey

of high school students in Canada's Ottawa and Niagara regions linked childhood foraging with environmental knowledge held later in life. These positive environmental associations in the latter study are notable because the respondents lived in built-up, urban areas. More recently, research adopting an environmental lens has referred to the positive influences that direct experience with local nature in childhood can exert on environmental interests in adulthood (Vadala, Bixler, & James, 2007). Vadala and colleagues comment on Chawla's (2006) dismissal of links between how childhood play outdoors engenders environmental awareness in Norway on the basis of a pervasive Nordic affinity with nature that negates the need for further, overt provision. Such debate fuels an understanding that human-nature behaviours are rooted in social and cultural norms that are transmitted through people as much as through human-nature interaction. Indeed, outdoor experiences comprise one source, amongst many, through which we can acquire pro-environmental behaviors and positive attitudes towards nature environments. This may go some way towards responding to Gough's (1997) plea for environmental education to attend "more fully, self-critically, and reflexively in the cultural narratives and processes within which identity, agency, and knowledges are discursively produced" (p. 159). Seen this way, outdoor play becomes a method for fostering socio-culturally responsive ways of thinking and acting.

Nature kindergartens are appearing throughout Scotland, United States, Australia, Canada, and countries in northern Europe. Common to each of these is not their location, landscape, or any curriculum specific to early childhood education; they simply share the label "nature kindergarten" and are founded on the belief that learning in natural settings offers unique benefits for children in their formative years (Ånggård, 2009). In itself, sharing a label does not infer that similar practice arrangements are evident in each setting. Indeed, recent texts highlight situated and culturally-constituted facets (Waite, Huggins, & Wickett, 2014) and, in response to Benwell (2013), comparison facilitates an interrogation of intricacies. Thus, a comparison of nature kindergartens is timely and provides an opportunity to identify determinants of variation in their nature-based practices.

Ingold's (1996) use of Shweder's (1990) "intentional worlds" is useful in theorizing the ways that kindergartens use nature environments. Following this reasoning, the nature environment and objects within it take on culturally-constituted meaning through the ways that humans interact with them. Seen this way, a validated blueprint of how things should take place is continually transmitted from one generation to the next (Ingold, 1996). This aligns with recent empirical research demonstrating that nature kindergartens and their provision—while heavily influenced by what a site affords in terms of its natural features, climate, and other situated elements (MacQuarrie, Nugent, & Warden, 2015)—cannot be disjoined from the habitual interactions of subjects (Schweder, 1990). Opportunities to forage can be regarded as another such affordance and, therefore, were important to this study's design.

Adults, Risky Practice, and the Habitus

Individuals subconsciously absorb the cultural norms that surround them (Bourdieu, 1977). The concept of *habitus* accounts for the ways in which values, ways of behaving, and “common sense” thinking are ingrained from an early age (Bourdieu, 1989). Habitus can shed light on actions such as foraging by demonstrating how practices are influenced by norms embedded in different cultural identities of which agents have no knowing access.

Any inquiry into early childhood practice calls into consideration the perceptions, attitudes, values, beliefs, and behaviours of the adults who surround the developing child. The influence of adults is rendered more complex by, for example, forest terrain and weather. These “wilder” locations are generally considered as sites that are less driven by adult agendas (Lester & Maudsley, 2007). The outdoor teacher, in contrast to the classroom teacher in a more controllable setting, may adopt the role of “gate-keeper,” regulating information, attitudes, and activity through consent (Nutbrown, 2010). We prefer the term “conduit” over gate-keeper to describe adults who guide young children through their nature-based experiences, as it permits more attention to be paid to adults’ own subjective habits and cultural dispositions.

Foraging is part of a wider debate regarding risk-taking behaviours in the outdoor classroom. The literature critiques diminished access to outdoor spaces as limits are placed on what and where children can access. These constraints include safety fears, such as stranger danger (Gill, 2007) and those stemming from policy and curriculum (Mannion, Fenwick, Nugent, & l’Anson, 2011). In line with Lindemann-Matthies and Knecht (2011), Waite et al. (2014) use Kelly and White’s (2013) conclusion that “the intentionality of the teachers” (p. 9) is central and such sentiment is relevant to an investigation of adult mediation of foraging practices. Teachers, with their situated dispositions, will vary in their viewpoint of the same natural resource. The degree to which putting foraged, unprocessed foods in one’s mouth may constitute risky behaviour raises important questions about how a practice that can be viewed as normal within some social groups is viewed with suspicion in others.

It follows that if foraging is part of a nature kindergarten’s overt curriculum, it is likely because adult conduits have deemed it educationally valuable, and the manner(s) in which foraging is made relevant becomes apparent through comparison. By observing the enactment of “taken-for-granted” foraging practices within authentic practice at nature kindergartens, this study aims to consider how cultural practices are shared and subtly transmitted, as well as how contrasting versions of a similar practice may come to exist in two different countries.

Methods

Data is reported from two nature kindergartens: one in Finland and one in Scotland, where 25 and 16 days respectively were spent gathering data on day-to-day routines between February 2010 and June 2011. Each case was viewed as a “bounded system” (Stake, 2000) selected for its own singularity, in that participants of each nature kindergarten reflect dominant cultural beliefs and socially constituted practices. Careful case selection through certain criteria permitted a focus on situational facets of each intrinsically unique case (Stake, 2006). Criteria included, for example, kindergarten staff coming from the country in which it was located, as those adults spent their childhoods in the same culture, and garnered the similar formative tastes (Lupton, 1994).

Observation

An observational protocol was devised to monitor practices. Observation schedules were completed daily—one for each full day’s session, for the 41 days, on a semi-participant basis (Punch & McIntosh, 2014). While participant activities were the central focus, other contingent factors, such as weather conditions, were also recorded. The schedules were completed using three-minute scans at half-hourly intervals and involved systematic field notes (Emerson, Fretz, & Shaw, 2011) that detailed the location and grouping of both child and adult participants during specific sessions. Both the scan and interval duration were based on recommendations and justified during scoping visits (MacQuarrie et al., 2015). The study design was systematic yet flexible, and thus capable of examining manifold interactions and relationships with intricacy (Yin, 2011), while remaining responsive to the fluxes of seasons and climate (Fjørtoft, 2004) and multi-sensory qualities (Henwood & Pidgeon, 2001). In total, 316 scans were completed at these two settings.

Interviews and Conversations

Both practitioners and children at nature kindergartens were involved in interviews and conversations. An audio-visual “Flip” device was employed to document sensorial content and context for later reference, such as smoke from the fire and its influence on human-human and human-nature interactions. Four practitioners were interviewed post-session, to capture their opinions and reflections of what they observed (Brown & MacIntyre, 1993). With the children, informal and setting-appropriate conversations (Boileau, 2013) took place when young participants volunteered information and artifacts to the researcher. Generally these conversations took place at the site and during a session; we spoke while watching our food cook on the fire or while waiting for a fish to bite a line. In total, 32 conversations with children were recorded, ranging from one to nine minutes in length. Verbatim transcriptions were made and conversations

with the Finnish children were translated into English. Data collected from the observations, interviews, and conversations were categorized and reduced using thematic analysis (Boyatzis, 1998). Data verification was established by all texts being confirmed by respondents as an accurate record of the conversations (Lincoln & Guba, 1985).

Findings

Overall, there was significant variation in the approach, content, and employment of foraging and fishing in day-to-day nature kindergarten practices. At the Finnish case, participants took five edible resources from their local environment: wild berries, *mahla* (Birch sap), perennial herbs, mushrooms, and fish. In Scotland, participants foraged wild berries and wild garlic. Three principal themes, relating to the transmission of cultural norms through foraging practices, were yielded.

Choice: Frivolity versus Necessity

At both cases, participants foraged irrespective of whether other sources of food were readily available to them. At the Finnish case, for example, hot stews were collected from kitchen facilities at the main kindergarten building and brought on site in insulated containers on a trolley. In Scotland, packed lunches from home were eaten or, on occasion, ready-made meals were reheated in the kindergarten's microwave. That foraging was a choice and not a human need was a determining factor in the level of recorded foraging. Foraging was both spontaneous and planned. Finnish participants would sometimes pick berries at hand, en route to elsewhere, and only took what they chose to eat. At other times, expeditions were purposeful, with an objective to collect larger quantities to prepare berry cordial for winter. Planning at the Scottish case was evidenced by other ingredients being brought to the setting, to be added to foraged ingredients.¹

Both settings had access to a lake, but only the Finns were observed fishing. In Scotland, one teacher explained how the Care Commission (the regulatory body responsible for care services) had instructed that a fence be built around the shore of the loch to "protect the children." This highlights how public policy, as well as the teachers themselves, influence children's developmental experiences (Mannion et al., 2011). Meanwhile, the Finnish findings suggest that fishing was not wholly guided by the need to forage *per se*, which indicates respect for and recognition of nature's unpredictability. As one pedagogue remarked: "If no fish, we eat sausages. [Maybe] not lucky with the nature today."

The importance of foraging to hunter-gatherers centres on the degree to which it is imperative to a people's survival (Hawkes et al., 1995). These Finns and Scots are not subsistence societies and since there is no imperative to forage, foraging carries different meanings for them than it does for those

who directly depend on nature's edible resources for sustenance. Those who routinely gather out of choice and model nature's affordances in that way are demonstrating its cyclical significance and "normalness" to all who observe. Deep and unquestioned cultural values were accorded to foraging that can be explained as passing on practices or ways affiliated with previous generations (Bourdieu & Passeron, 1977).

The next exchanges show adults sharing an experience of nature with younger generations through their sense of taste, alongside the children's informed acceptance of the practice. Gathering and tasting *mahla* (Birch sap) was both educative for the children and pleasurable for all:

Adult A: You have done this before?

Child A: I drank it with dinner tonight...my parents will drink too.

Child B: I know this taste. My grandparents do this.

Adult B: Healthy [elixir] drink...coming up for us from roots. We have some and buds have some.

Child B: My [Grandfather] gave *mahla* to nourish the cows after winter.

Adult A: ...and girls use for shampoo for beautiful blonde hair.

Adult B: I like the look on the face when *mahla* hits the tongue...I like seeing taste, discover, learn—it fixes the memory.

There was a pride in this final sentiment, but the comment also reflects the habitus of this conduit adult and his wish to impress the taste upon the children as a formative element of their early life experiences (see Beames & Telford, 2013). While adult sentiments expressed enjoyment, there was meaning ascribed to sap that was rooted in cultural history and folklore. It was perceivable that the taste may leave the children with a connection to nature and a basis for their own adulthood (Curtis, James, & Ellis, 2010; Kellert, 2002).

The Finns saw food value in marginal sources. One February day, for example, an ice fishing session required considerable effort and skill from both adults and children. Following a walk in snowshoes across 400 meters of frozen lake, a hole was drilled through the ice before a cold, patient wait for a catch. This was not a frivolity or a contrived character-building exercise, but an activity rooted in fostering an understanding of how human beings depend on the earth for sustenance and nourishment. Following Bourdieu (1977), the adults were endorsing such activities as worthwhile and necessary, and children were quick to mimic and then adopt these practices as taken-for-granted elements of "what we do." Observed behaviours were a manifestation of an engrained, resilient mentality to withstand the long, harsh winters. The Finns' tireless foraging, even in times of extreme weather, and when other food sources were readily available, reified this ideal.

Conduit Adults and their Agendas

Fire was a pervading feature of the data at the Finnish case; it was lit faithfully each day, not only for warmth or cooking food, but also for the socializing and radiant comfort that gathering around the fire provided. Their fires epitomize a relationship with nature that they felt was an essential characteristic of practice that is central to surviving the elements. To one looking in from the outside, the Finn's use of fire prompted consideration of whether human-nature relations cement simply by going outdoors. By their actions, the adults showed a commitment to facilitating the experience. When fallen deadwood was collected, chopped, and stored, the talk was of renewable fuel and a stewardship role towards "our forest." When the fire burned, the talk was of different tree species and burn times. This passive form of cultural transmission from one generation to the next appeared to be very deliberate in purpose, but subtle in method.

At both settings, children were attentive when foraging was presented as an activity, and both the Scottish and Finnish children made reference to food available to forage. Here, however, the similarities end. Take again, for example, berries. Chipenuik (1998) recognized people's preference for sweet fruits, and participants in the present study were similarly inclined. In Scotland, the ubiquitous bramble was sought with confidence, yet usually only eaten after a discussion of potential risks and, in this instance, caution concerning pesticides:

Child A: Look, there's more.

Adult: That's right, but what do we have to be careful about?

Child B: We don't know what they are.

Child A: They could have been sprayed...and poisonous.

Adult: So what shall we do? What do you think?

Child B: Take it and wash it and look in the book.

While this exchange shows that foraging occurred, it hints at the adult's reliance on health and safety agendas to inform their actions, and this reservation may derive from novice outdoor educators (see Mannion et al., 2011). In Finland, blueberry picking is an equivalent narrative and adults were vocal regarding their lifelong experience of embedded facets of culture, including *Everyman's Right*.² Finnish children seldom sought approval to pick and eat, and comparison between these data is revealing, as nested within the data are not only preferences borne of situation but also what Bourdieu (1977) might term an emerging habitus that led children to look for reassurance, or not. Berry picking aside, the Scottish "foraging habitus" showed little desire to safely gather the edible fruiting bodies of fungi. A summer episode offered further confirmation of adult self-doubt, perhaps bred of a lack of accustomedness:

Child B: Don't touch it.

Adult: Yes, and if we're not sure we'll leave it.

The adult's and child's combined decision to not pick mushrooms did not come from a rule book or policy document, and can be seen as a manifestation of attitudes and beliefs inculcated in early life, via previous generations (Bourdieu & Passeron, 1977; Oliver & Kettle, 2010). This same theoretical account also explains how both Finnish pedagogues showed deliberate intention in passing on their adult ideologies that championed accordance with nature. These examples illustrate how contrasting attitudes towards nature in two different socio-cultural settings are passed from adult to child through subtle cues surrounding what is right and wrong.

Situated and Seasonal Influences Upon Practice

The Finns embraced foraging, and repeatedly sought opportunities to gather food throughout the year. Participants took advantage of seasonal produce by seeking foods when available in abundance. Sap, for example, is only foraged in late spring and in response to climatic circumstances after overnight frosts. In the Scottish spring there was a plan to pick the prodigious wild garlic for making pesto to serve with pasta at lunchtime. The group smelt the forest floor before they reached it:

Child A: I know it's coming.

Adult: How do you know?

Child A: I can smell it.

Child B: And, yes but it's always here. This is where it grows.

Similarly, in the Finnish summer, *ketunleipä* (wood sorrel) was sought. The children ate its tiny leaves raw while collecting, and added the surplus to omelettes fried over the open fire back at the hut. While in both these episodes further preparation was completed indoors, a connection had been nurtured during the forage that would be reaffirmed upon dining. Mealtime conversations were rich with descriptive detail as participants talked not only about their lunches but recalled tales about their search for ingredients. The wild garlic forage also suggests that participants knew their wooded playscapes well. These and other children knew where to look and saw largesse in their secret places (Thomas & Thompson, 2004). In turn, this nurtured relationships with nature, as connections were found in seasonal change (Turner, 2011).

Availability of edibles is a consideration alongside mediated access. Both can be discussed in terms of the abundance and scope of resources, as well as seasonal and climatic facets that impact opportunities to forage and invite consideration of local, ecological messages that are contextually relevant. For example, at the Scottish loch, the channel to the available fish was controlled by regulations beyond the conduit adult, and the loch would never freeze to the extent that they could not drill the ice and fish. Equally, in the Scottish forest, brambles were the only edible berries growing and those consumed at the point

of collection were all that were taken. The Finnish case, by contrast, was afforded an abundant supply of lingonberries, cloudberries, and blueberries (Pouta, Sievänen, & Neuvonen, 2006), which participants ate directly from the bushes with sufficient surplus to prepare cordial to freeze for a later time.

Conclusions

From the Scottish and Finnish cases, the evidence indicates that their forests each represent a cultural construction that, when compared, yield foraging practices that are unique and culturally relative. Comparison was not intended as an exercise in attaching positive or negative values to cultural practice, but rather resonance and difference are seen as expressions of how we actualize our identities as actors in our intentional worlds by tempering the ways through which we interact with nature (Gough, 1997; Ingold, 2000). This thread helps us to more deeply understand why participants do what they do when attending nature kindergartens, where comparable edible resources are available to them.

Bourdieu's (1977) concept of the habitus is so far-reaching and all-encompassing that some cynics have claimed that "everything is habitus" (e.g., Reay, 2004), and they might be right. Until now, however, foraging practices have not been interrogated with Bourdieu's social theory. Foraging is, as with other food moralities, "generationally nuanced, serving to mediate child-adult relations within particular cultural contexts [and] informed by local cultural practices" (Curtis et al., 2010, p. 293) and viewed differently throughout one's life course (Pouta et al., 2006). Nature kindergarten participants cannot be divorced from their situated contexts, yet as individuals, it is they who each perceive and decide. Outdoor fishing or outdoor toasting marshmallows is a choice that reflects how opportunities depend heavily upon whether adults choose, or feel habitually comfortable enough, to allow edible affordances to be eaten as part of their everyday practices.

In terms of implications for educational practice, the most obvious has to do with the role and the influence of the conduit adult. Two of our three principal themes feature seasons and landscapes—both of which are not open to excessive manipulation by humans. In the outdoor classroom, it is the adult who is able to wield a considerable amount of power by shaping the learning content and its delivery. Our findings challenge educators to ask themselves: "What kinds of cultural transmission are culturally desirable and permissible?" and "What practices and beliefs are being marginalized if those surrounding foraging are being championed?" Although our own bias is supportive of foraging as a way of "acquiring culture," it is vital that all educators question both the overt and implicit messages that are being conveyed to their charges (see for example Eisner, 1985).

On a personal level, the first author found it appealing to observe foraging in a culture other than her own, as it served to heighten awareness of her own

taken-for-granted notions of “the way things should be.” Rye bread with line-caught salmon cooked over an open fire is an abiding memory of what Finland tastes like. Through taste, this shared experience fed her “cultural history” in a way that has endured across contexts (Webb et al., 2002).

Foraging will likely remain a peripheral constituent in both outdoor learning and early childhood fields. Indeed, as noted by Hall (2013), why forage when you don’t have to? Yet, to overlook its potential value would be misguided. There is lifelong educational value in repeating foraging rituals that mark the changing seasons, as a means of coming to know tastes redolent of one’s culture and those of others.

Notes

- ¹ For example, wild garlic pesto was made by blending the foraged leaves with Parmesan cheese, pine nuts, and oil.
- ² In Finland, the legal concept “Everyman’s Right” gives the general public rights to access undeveloped land, predominantly forests and lakes, to hike, ski, fish, and forage.

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