ever certain combinations of tagged tokens were detected by the board.

How Successful was Ambient Wood?

Two studies were carried out over a 12-month period to assess the children's learning, using different combinations of the pervasive technologies. In the first study, eight pairs of students, ages 11–12, took part and in the second study 12 pairs of the same age participated. Initially, two pairs of children were asked to discover as much as possible about a different part of the environment by looking, touching, smelling, and listening. They were then provided with the devices to uncover more. To facilitate reflection, the children were encouraged to talk with one another and a remote facilitator, via walkie-talkies, reporting on what they had discovered, what its significance was, and what they planned to do next. The learning activity was deliberately designed to be open-ended rather than task-driven. This was to encourage the children to discover and observe different aspects of the habitat and to generate hypotheses about their relationships and their interdependencies. An aim was to see what connections they made when presented with various sounds and images in particular parts of the woods in relation to what they were experiencing and anticipating in the environment.

There was much evidence of the children integrating the findings and information obtained from the devices with their own observations of the physical environment. The outcome was the generation of hypotheses and explaining to one another their ideas about habitat relationships, distributions, and the underlying processes of the ecology. For example, one pair used the probe tool to generate hypotheses about why certain parts are drier (for example, leaves) than others (grass) and what the implications were for what was able to survive there. Another pair made inferences about the interrelationships between readings from the probe device (dry), sightings of organisms in the same location (woodlice) and information they received on the PDA about woodlice. Thus, information from the devices linked to the environment enabled children to begin identifying habitat relationships, distributions, and the underlying processes of ecology.

The two pairs of children then came together to reflect on and share their explorations in a makeshift classroom housed in a tent, in another part of the woods. A follow-up session was subsequently held in a real classroom where all the pairs of students came together with their teacher and the facilitators to draw further inferences from their explorations.

The findings from the studies illustrated how children use the different devices and forms of digital augmentation to further their exploration [7]. In particular, the information presented on the periscope, ambient horn, and PDA pinger led the students to look for what they had seen or heard and also provoked discussions about what they discovered in relation to relevant ecological issues.

One of the most successful forms of digital augmentation was the combination of the probing tool and the interactive visualization display. The children were able to integrate their present understanding of the woods, derived from their individual probes of it, with their subsequent reflections on the patterns appearing in the bird's-eye visualization compiled from the different paired children's readings.

At ground level, children probed many different aspects of the terrain, taking turns to either probe or read the outcome on the PDA. On average, each pair took about 80 readings, of which half were for light and half for moisture. This frequency of probing suggests the collaborative activity was highly successful at provoking further exploration. After taking a reading, the children would suggest to each other a different place to go to confirm or refute their hypotheses about what the reading would be there. They also suggested where to take the most extreme readings, and again, this involved making and testing predictions about the environment. In addition, probing sometimes led to the discovery of new plants when the children were looking for places or organisms that would provide them with different readings. The spontaneous conversations that took place suggested this method of interacting with the environment provided the children with many opportunities to undertake scientific inquiry.

At bird's-eye level, the children were fascinated that every probe reading they collected and recorded was now available as interactive data points on the visualization display (a feature unknown to them earlier).

We propose that digital augmentation offers a promising way for enhancing the learning process, especially **ENCOURAGING THE DOVETAILING OF EXPLORING AND REFLECTING WHEN INDOORS AND OUTDOORS.**