fig. 02.07 Embodied learning - Algorithmic Chalk Drawing (iii)

[Provide opportunities to sit, stand, lay in different positions - altering perspectives throughout the day or week when working alone or collaboratively in a group.]

Algorithmic chalk drawing

Learners are presented with both a block based programme and a text based set of algorithms that are written as a set of instructions for individuals to perform.

The 'code' provides a backdrop for themes centred around computational thinking, nevertheless remaining human centred. Different iterations and interpretations (hacks) are encouraged. The resulting chalk drawings are created through a physical, bodily inquiry often as a result of a collaboration between two or more individuals.

EMBODIED LEARNING

Algorithmic chalk draw

Text based instructions provided to learners.

[hold chalk in each hand];

[laydown];

[push chalk on ground];

[drawarc]x4;

[rollover]x2;

[repeat] x6;

//hack it, remix it

//What if you replace [drawarc] with another command?

//What if [rollover] became [rotate]?

//What if [laydown] became [standagainstwall]?

The direct result of such an inquiry is a canvas of chalk drawings on the school playground. This being a shared space, led to inevitable curiosity from other children who shared their 'wonders' with the creators.

These curious young learners were presented with the same instructions or lines of code and following a short overview proceeded to create their own iterations of arc drawings, much to the delight of their peers who naturally joined in.

fig. 02.02 Embodied learning - Algorithmic Chalk Drawing (i)

Questions raised by such an inquiry:

How does a closed set of instructions become such an open-ended activity?

At what point does the educator create space for choice and interpretation - should the 'code' be mastered first before providing opportunities for iteration?

There is an activist nature to this engagement given the visibility of the large canvas of the playground. The results are immediately visible to the community.

How do educators empower young learners to be curious, to be critical by questioning and to respond and act upon the above questions through such provocations?

What are the natural iterations that occur due to 'humans' being programmed?

Are such iterations or biases built into to the software we use for example within social media platforms?

I do not propose to answer such questions through the engagement suggested here however, such an experience can open a dialogue which begins to question some of the tools and proposed uses of them, particularly in education.

fig. 02.03 Embodied learning - Algorithmic Chalk Drawing (ii)

Smartphone camera tig

In this experiment, the intended use of the smartphone camera, as defined by the designers is challenged by using it as a 'capture tool' in the traditional children's game of 'tig'. The smartphone in the classroom has caused much debate in school staff rooms and within school policy making. The often polarised views tend to sway towards, keeping them out of classrooms, suggesting that they will disrupt learning rather than transforming the learning environment.

The smartphone camera is used in its literal sense as a capture device. Participants, within a defined playground area are invited to run and hide from the 'tigger', negotiating the features of the environment. The 'tigger', using the camera seeks to 'catch' the others as quickly as possible. After a defined time period which denotes the end of the game, participants review the photographs to determine if all runners were captured. The nature of instant feedback provides everyone involved with a realtime review of the game.

By 'permitting' the use of the smartphone for this game, learners are provided with opportunities to repurpose technology from the intended use and hence 'bend' the structures and systems of a traditional game. Participants are seen to be active within their environment whilst the 'tigger' constructs digital artefacts. I wonder how the game would evolve if all game participants had the use of a smartphone with a camera? To what extent could this 'realtime' view transform other learning experiences? Would learners have greater agency over their learning?

Inspiration for this interpretation of the game came from Klaus Thestrup of Aarhus University, Denmark. He researches media play in global contexts within experimenting communities and open labs.

fig. 02.04 Embodied learning - Smartphone tig (catch) game (i)

fig. 02.05 Embodied learning - Smartphone tig (catch) game (ii)

fig. 02.06 Embodied learning - Smartphone tig (catch) game (iii)