

Using technology to measure children's social life and engagement in school

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Background

Over the past 3 decades schools have reduced children's playtimes (Baines & Blatchford, 2019; 2023).

But the contribution and value of breaktimes in the school day is little understood and they are often taken for granted. This is not least in terms of their implications for children's engagement in class after break.

Some research suggests that breaktimes are important for classroom engagement and behaviour after break (Pellegrini, 2004; Rivchun & Rhea, 2019) other highlight their importance in terms of wellbeing (MacNamara et al. 2016) but little research has explored this in any depth or examined possible explanations for effects.

This study seeks to examine connections between physical, social and playful activity on the playground relative to classroom engagement, participation and interaction after break and in relation to children's sense of wellbeing.

Research Question

To what extent and in what ways do children's peer social relations, interactions and activities in the playground relate to their classroom engagement, learning and well-being?

Design

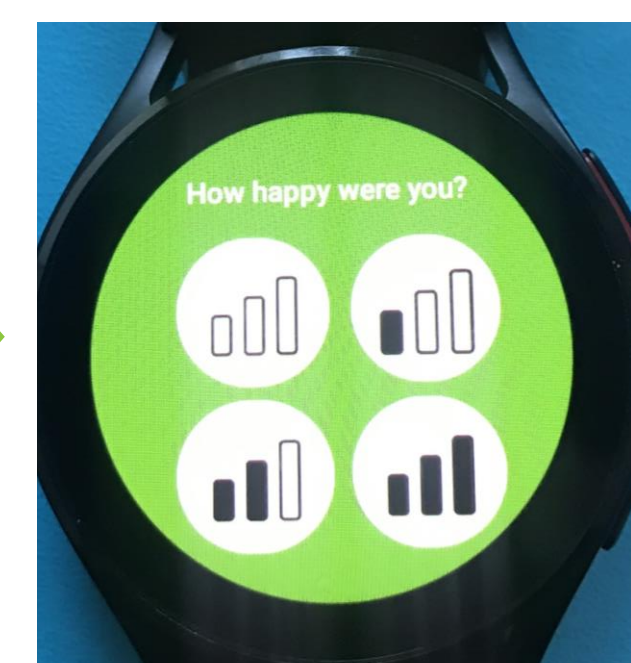
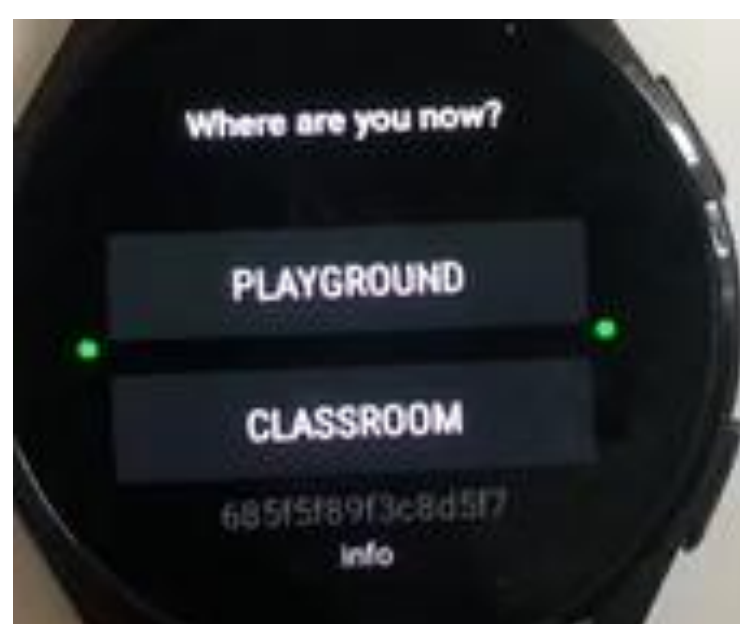
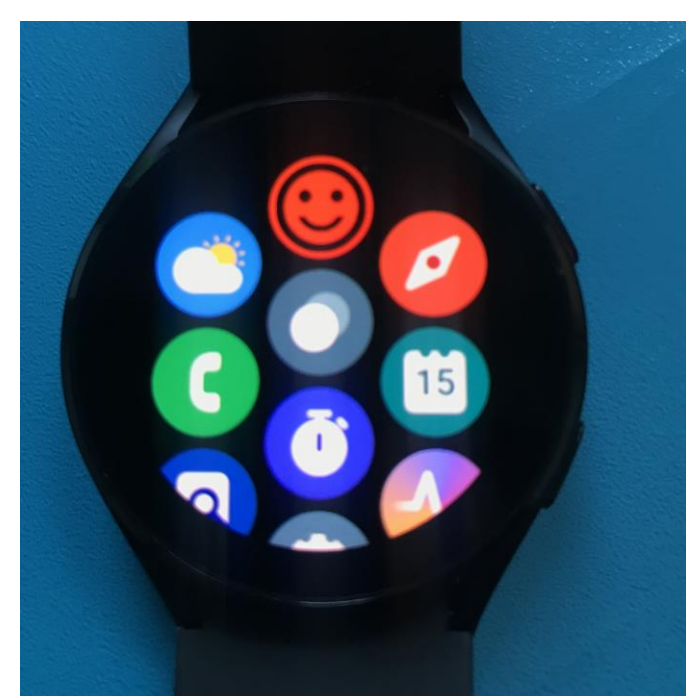
- Two case study classes of Year 5 children (9-10 years) in two primary schools.
- Two distinct playgrounds – resource rich vs typical/traditional
- 7 days of data collection in each location

'My Views' APP

Records views about learning in class and about a child's feelings at the end of playtime.

It also captures information about physical activity (steps) and physical intensity (heart rate).

15 watches placed on children at any one time connected to computer via local WIFI (at end of the day)



In class (pre-break)

Observation Measures

- Behavioural engagement
- Pedagogic content
- Task/curriculum
- Seating relative to peers
- Time/length of lesson

EMA (smart watch)

- Emotional and cognitive engagement

Breaktime

Sensor Measures

- Interaction/proximity
- Position/movement

Observation measures

- Context
- Length of break
- Activity type
- Behaviour
- Game/Active network

EMA (smart watch)

- Emotional engagement/enjoyment at end of break
- Total activity over break
- Physical intensity (heart rate)

In class (post-break)

Observation Measures

- Behavioural engagement
- Pedagogic content
- Task/curriculum
- Seating relative to peers
- Time/length of lesson

EMA (smart watch)

- Emotional and cognitive engagement

Hat GPS sensors

Record X, Y and Z position every few seconds to provide data on social proximity networks

Up to 15 hats placed on children at one time and then data stored on computer via local WIFI network (at end of the day)

