Stuff, Skills and Stories

Social practices of secondary school sustainability in the UK

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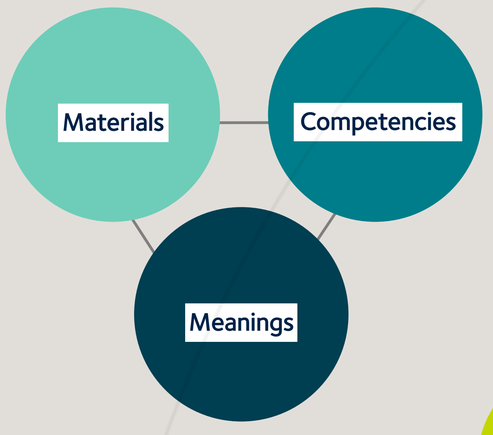
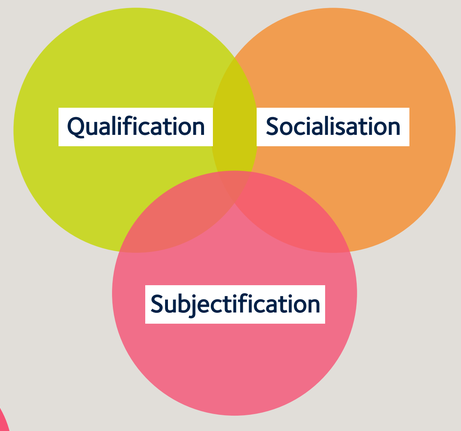


Elements of Social Practices

Adapted from Shove et al. 2012

Whole School Sustainability

Adapted from Wals and Mathie 2022



Purposes of Education

Adapted from Biesta 2020

Andy Aitchinson / Ashden / climatevisuals.org

'I don't know how that we can actually build up the **story** so that everyone has got that culture of, "Hang on, there's a light on there, [I'll] switch it off. There's a piece of litter, [I'll] pick it up". For me, it's definitely the **story**. We've done a lot of **stuff**. Lights we put in, where we can or where it's appropriate, automatic systems to switch them off when people aren't in the place. Sometimes when they're sitting really quietly, it goes off, which is [laughs] quite funny, and they've been staying the same place for a long time. So we can do that sort of **stuff**, but you can't do it all with automation. So yeah, definitely the **story** [is missing], I would say.'

Interview with a bursar at a state school

Background

School buildings will play an important role in the UK net-zero emissions strategy. Schools represent an opportunity for both demand reduction and decarbonisation, with the UK Department for Business, Energy & Industrial Strategy identifying the education sector as a priority for cost-effective energy savings. Over 1,300 school leaders have joined the "Let's Go Zero" campaign, in which they declare their aspiration to operate with zero carbon emissions by 2030.

Schools are also places of teaching and learning, with school climate action empowering future generations and positively impacting the surrounding community. The UNESCO model of whole-school sustainability emphasises the relationship between the facilities, classroom learning, and preparing young people for the future, with environmental and sustainability educators referring to the five Cs of climate education: curriculum, campus, culture, community and careers.

However, many school energy, climate and sustainability programmes focus either on individual, pro-environmental behaviours of students, or technological and administrative solutions that students are unable to influence. By shifting the focus to social practices, one can holistically explore what enables and maintains the patterns of activity related to sustainability within the school system (Shove et al. 2012):

- Materials: the stuff that makes practices possible, for example technology and infrastructure.
- Competences: the knowledge and skills required to successfully accomplish practices.
- Meanings: the social or personal meaning or identity that reinforces the carriers of practices.

Another theoretical reference point is the framework for describing the purposes of education developed by educational theorist Gert Biesta (2010). Rather than prescribe a purpose, he advocates for a clear articulation of three different but related functions of education:

- Qualification: the primary, explicit objective of education in terms of providing children with knowledge and skills.
- Socialization: the transmission of social norms and values, which can be desirable or undesirable and is often part of the hidden curriculum.
- Subjectification: the opposite of socialization as the learner gains independence and is empowered to challenge the status quo.

Finally, a recently developed model of Whole School Sustainability (Wals and Mathie 2022) takes a systems perspective on low carbon schools, with six interrelating elements:

- Vision, Ethos, Leadership & Coordination: school stakeholders setting the sustainability agenda.
- Curriculum: what is learned.
- Pedagogy & Learning: how it is learned.
- Institutional Practices: buildings, campus, systems.
- Community-Connections: relationships with the surrounding community.
- Capacity Building: continuing professional development of teachers and staff.

Methodology

To investigate the social practices of school sustainability, I developed relationships with educators interested in sustainability through networks such as the UK Schools Sustainability Network (UKSSN), as well as pursuing personal connections and other introductions. Twelve secondary schools in Greater London and the Thames Valley Region participated in this research (six state schools and six independent schools).

At each school I conducted semi-structured interviews about school sustainability practices with a range of stakeholders, including teachers, school leadership, facilities and finance managers, governors and parents, for a total of 71 interviews. I also conducted focus group conversations with students, both for safeguarding purposes and to incorporate more youth voices, which included 66 sixth form students. Nine interviews were conducted with experts in school sustainability to provide additional context.

Results

Preliminary results indicate:

- Practices related to food and waste, which are more visible and regularly encountered as part of the school day by all stakeholders, were more readily talked about.
- When reflecting on elements of practice that might be missing in terms of enabling or supporting low-carbon practices, "story" was most often mentioned.
- Independent schools were more likely to have the resources to invest in the "stuff" for sustainable practices, and more likely to support student voice in terms of engaging with the "skills" and "stories" of practices.

The table below provides a snapshot of how sustainability practices (and elements of practice) were discussed by different school stakeholders.

Issue/Practice	Stuff	Skills	Story
Energy: decrease (and decarbonise) classroom energy use	Heating system (boiler), onsite renewables (PV), Technology in classroom, Lighting controls	Teacher use of technology, Lighting (or using daylight) for sections of classroom depending on activity	Appropriate lighting conditions for learning, Value of natural light
Food: more vegetarian/vegan food consumption and less food (and food-related) waste	Catering/procurement, Food options/portions, Dishes/cutlery, Packaging	Choose food based on carbon footprint and health	Caterer values, Healthy eating (risk of negative story related to eating disorders)
Materials/Waste: less litter and more recycling	Bins (type and location), Signage (how to use), Paper/printers v. digital materials	Knowledge of what can go in different bins, Teaching practices (digital resources v. printing)	Willingness to sort rubbish and find the appropriate bin, Teacher habits
Nature/Biodiversity: increase biodiversity on school grounds	Land use (playing fields, courtyards, etc.), Groundskeeping tools/materials	Nature friendly options for mowing, spraying, etc.	Tidy v. messy grounds, Groundskeeper habits
Travel: more active travel to school, especially cycling	Bicycles, Safe cycling routes, Bicycle racks/sheds	Safe cycling along busy routes, especially during morning commute	Parental fears and sense of risk, Student motivation (environment, health, independence)

The Alan Turing Institute

Data Storytelling

During my doctoral research I was able to participate in the Enrichment Scheme of the Alan Turing Institute, the UK research institute for data science and artificial intelligence. Building on the research project shared in this poster, I worked with three of the schools based in London on a participatory data storytelling project in which students further explored the issues of energy and air quality.

The image below shows a group of students that analysed the electricity and gas smart meter data for their school and sought to creatively share the information with other school stakeholders through creative data visualisations (a rose chart showing a 24-hour clock) and data "physicalisations" (a bar chart of weekly energy consumption made with batteries collected for recycling).

For more about data storytelling see:
https://github.com/alan-turing-institute/TuringDataStories

https://www.geog.ox.ac.uk/graduate/research/bfinnegan.html