

Iowa State University

From the Selected Works of Andrea S. Wheeler

September, 2012

“The Future We Want?” The sustainable school as a place of wellbeing

Andrea Wheeler, *Loughborough University*



Available at: https://works.bepress.com/andrea_wheeler/18/

2nd International Conference on Geographies of Education

September 10th – 11th
2012

“The Future We Want?” The sustainable school as a place of wellbeing

Andrea Wheeler

The Centre for Engineering & Design Education

Outline

- My paper describes the work of an UKERC/ESRC early careers fellowship at the University of Nottingham exploring the dimension of behavioural change in the design of sustainable schools and a Research Associate position at Loughborough University.
- My paper illustrates through narratives, drawings and performances the engagement of 10 to 16 year old children in the problem of sustainable development and the question of a sustainable lifestyle. It examines notions of agency and citizenship for children in the design of new schools.
- Examines the notion of wellbeing as a way to explore how to design a sustainable school.
- It asks the question: Are there new ways of thinking, living and being emerging, demanding support from educationalists; and does the 'sustainable' school and its design, provide a testing ground for supporting changes in patterns of living?

Early Careers Fellowship Project

March 2007 – February 2010

Research Associate

May 2010 – September 2012



UK Energy Research Council/ Economic and Social Sciences Research Council

<http://www.sustainability-and-schools.com>

EPSRC/Innovative Manufacture and Construction
Research Centre

<http://postope.lboro.ac.uk/>

The Building Schools for the Future Programme: An extraordinary number of 'sustainable' schools? (UKERC/ESRC Fellowship programme)

- How Can We Design Schools As Better Learning Spaces and To Encourage Sustainable Behaviour? Co-Design Methodologies and Sustainable Communities.
- The initial Government vision that these schools would be 'sustainable' through the relationship of the building design and the behaviour of the children. (Blair, A, 2004). *Sustainable development will not be just a subject in the classroom: it will be in the bricks and mortar [...] they [children] will see and work within a school that is a living, learning place in which to explore what sustainable development means.*
- The role of children's participation in the design of sustainable schools way a key element of the marketing of the programme.

Educational theories: AGENCY AND DEMOCRATIC EDUCATION

- According to Biesta education should not be “...just about the transmission of knowledge, skills and values, but [...] concerned with the individuality, subjectivity, or personhood of the student, with their ‘coming into the world’ as unique, singular beings” (Biesta 2006: 27).
- Emphasis is on educational relationships: “on trust, and on responsibility, while acknowledging the inherently difficult character of education” (Biesta 2006: 15).

Reference

Wheeler, Andrea (2008) "Architectural and Educational Perspectives on Community and Individual Agency in Creating Sustainable Human Society: Social Cohesion and Sustainable Behaviour?". In: Agency, 5th International Conference of the Architectural Humanities Research Association, The University of Sheffield, School of Architecture, 14th-15th November.

Education for Sustainable Development and Educational Philosophy: CITIZENSHIP

- Worldy pedagogies aim to connect young people to a global context: to the worldly experience of human beings in their plurality; to their sharing of a common world.

References

Wheeler, Andrea (2010) "An interview with Harry Shier: Contrasting children's participation in the UK Building Schools for the Future programme with the Nicaraguan context" *International Journal of Children's Rights* Vol. 18/3, 457-474

Wheeler, Andrea (2009) "The Ethical Dilemma of Lifestyle Change: Designing for sustainable schools and sustainable citizenship". *Les ateliers de l'éthique*, 4(1), 140-155.

Firth, Roger and Andrea Wheeler (2009) "Sustainable Schools' and ITE: Building the Dialogue?." In: Proceedings of the UK ITE Network for Education for Sustainable Development/Global Citizenship Annual Conference. Developing a critical perspective of ESD/GC in ITE. 9th July 2009, Keyworth Centre, London South Bank University. Available in print and online at: <http://www1.lsbu.ac.uk/ccci/uk.shtml>

WELLBEING

- Debates surrounding wellbeing within policy suggest a common call to look beyond economic measures of social progress.

Wheeler, Andrea (2011) "Place, Well-being and Pedagogies of Connection in Design Workshops with Young People". Chapter in *Well Being and Place*, eds. Sara K. Fuller, Ashgate.

DRAWING and other means of expression

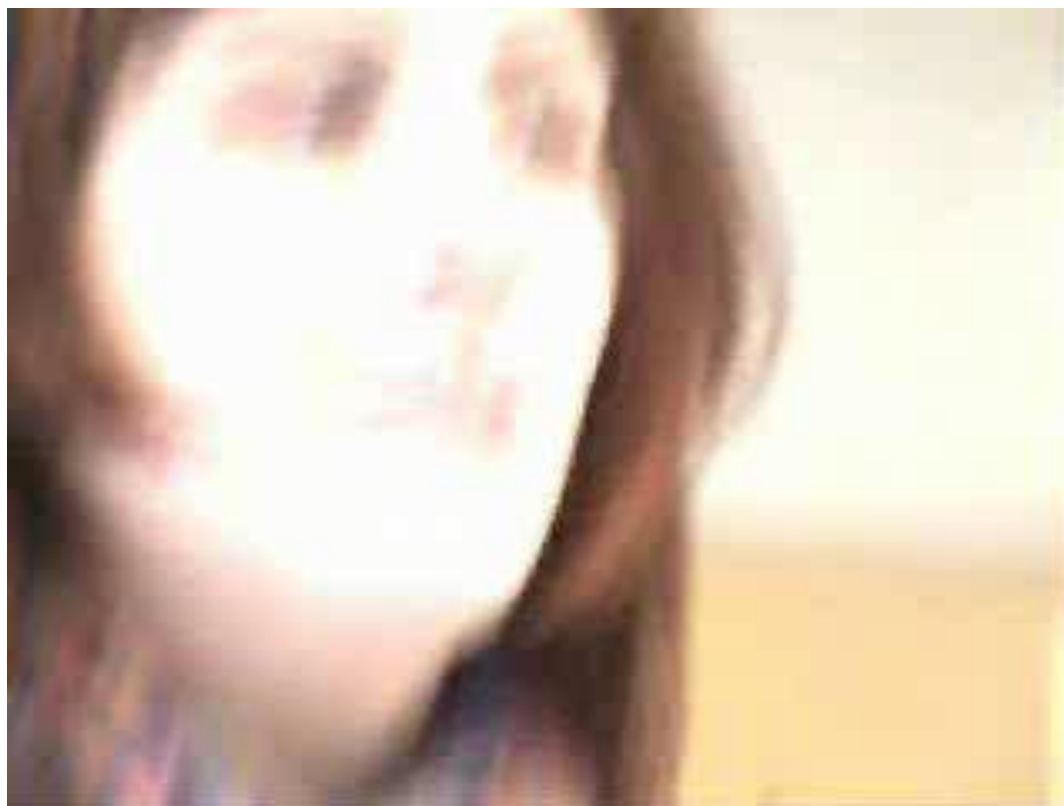
- If children are to be encouraged to make lifestyle changes they will have to enter a discussion of our relationship to the environment and to the political and philosophical complexities this entails. Young people will have to reconcile conflicting social pressures. Children need ways to discover and reformulate their ways of being in the world and this will require more than just spaces for learning.
- Art based research have children the place to thinking about bringing into being new ways of living.

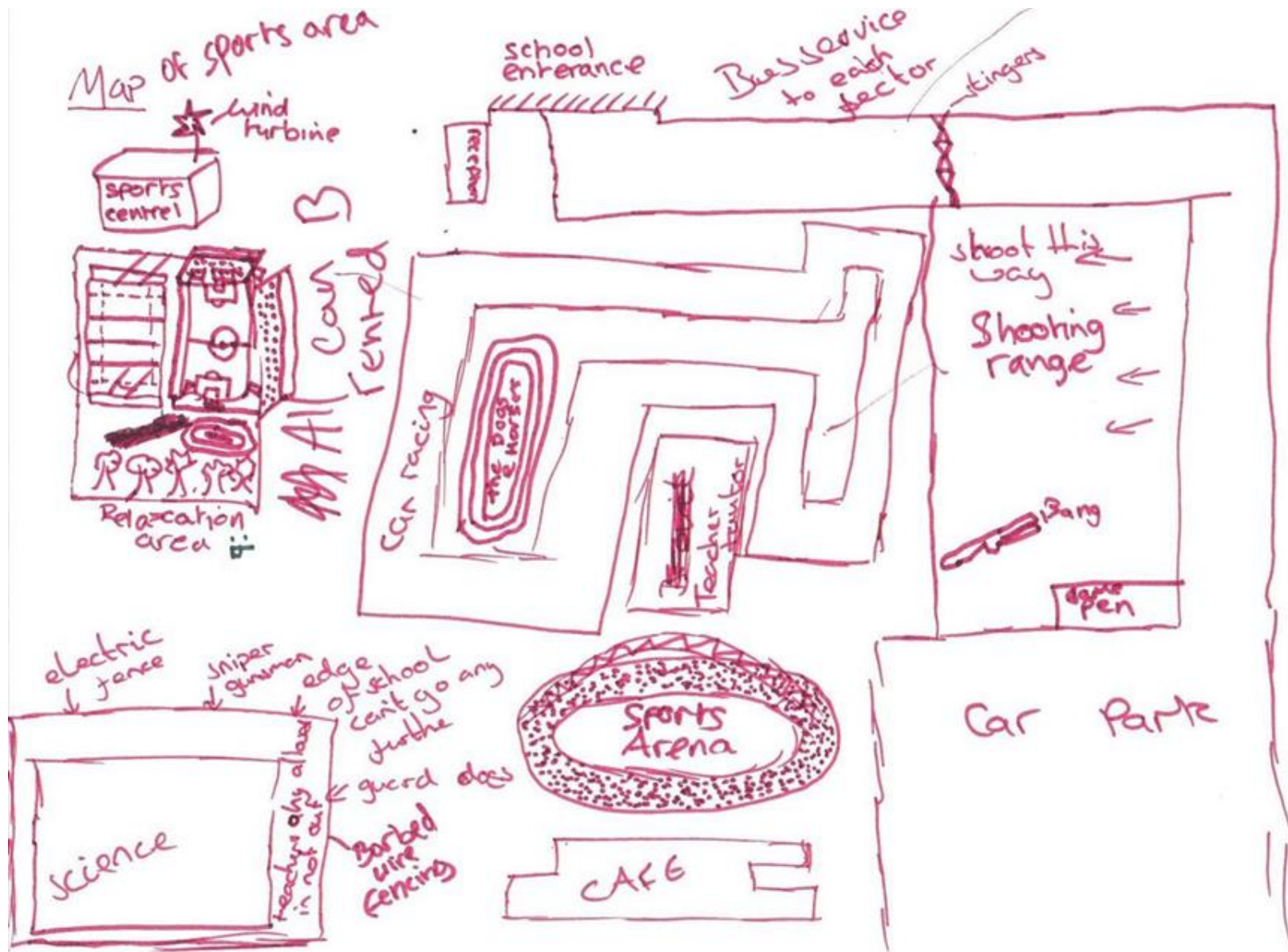
Wheeler, Andrea (2009) "Theatre Practices, Performativity and Young People's Ethical Architectures", Ethics and the Built Environment Conference, University of Nottingham, 9-11th September 2009.

AGENCY AND DEMOCRATIC EDUCATION



CITIZENSHIP

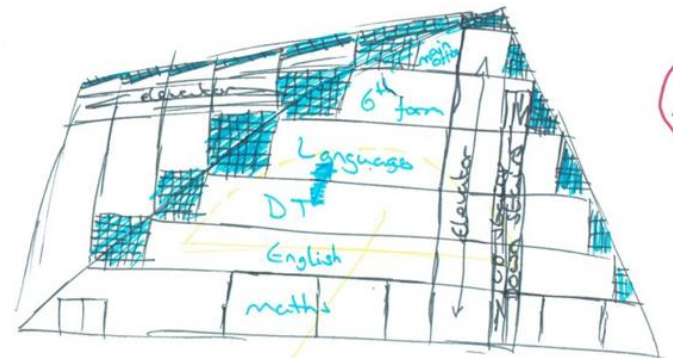








all materials
are rec
are made from
recycled mate
and all paper recy
ed



■ = solar panels

centre of
building storage
room and isolation and meeting rooms

A

Narratives

Everyone is just worrying about the credit crunch, the credit crunch at the moment. It might be about the public, but it is the Government as well.

Researcher: Do you think the credit crunch [...] or the 'economic crisis' has something to do with global warming?

Yeah [all of the group responding to the question]

Because the banks are lending money, but people aren't paying it back...Because it's like [a man] maxed out like six credit cards and killed himself, and then his wife had to pay it off. Because like if moneys gone out of your bank account you won't have enough money to buy light bulbs. People want, want, want, they want to go on holidays, they want big cars, they want their children to have the latest video games.

Researcher: Do you think people could stop behaving like this?

Some kids get spoilt abit sometimes [...] because kids get spoilt my Dad started saying things I don't need and I want I have to buy it myself. It teaches me how it's going to be like when I grow up. You're limited in what you can buy. And one's that get spoilt should do it as well [...] because when they're older it's not going to happen and you need to work for it.



Do you think we should stop
global warming?



Global warming panic...

PostOPE : Post Occupancy Performance Evaluation. (EPSRC funded Research Associate with Masoud Malekzadeh and Professor Dino Bouchlaghem)

- Investigate the difference between computer based predicted energy performance of buildings during design and the actual in-use performance using a number of case study school buildings.
- Innovative art-based research methods with children.

PostOPE : Post Occupancy Performance Evaluation.

- Whole school research: to investigate the difference between predicted energy performance of a school and the actual in-use performance required detailed information from the whole school on how the school was being used.
- Engaging children, and research with children required appropriate methods.
- Democratic/ innovative methods to motivate behaviour change.

Problem. Why do modern building designed for energy efficiency, using modern simulation prediction tools, frequently fail to perform as intended? Why is the difference between predicted and actual energy use of schools so high?

Objective. Understand this difference and determine a way to assess this difference.

Action: Our emergent approach for sustainable schools. PostOPE (the project) combined different assessment methods .

IMPACT: POE already making a difference in schools. The importance of application of whole school methods for the construction industry.



PostOPE: Methods

- Open discussion
- Walk through using video
- Art based research workshops
- Quiz

Masoud Malekzadeh, Dino Bouchlaghem and Andrea Wheeler (2011)
“Developing a participatory POE research method to support emerging lifestyles”
Special Issue of Architectural Engineering and Design Management (AEDM) (in preparation)

	Case Study One	Case Study Two	Case Study Three
Windows and ventilation systems	“We also have this automatic window thing for when it gets too stuffy. When you produce too much CO2 the windows open, it's automatic [...] If you talk too much in classroom they open (laughs)”.	“In the whole school there are automatic windows that you have to open and close with a key and there are only about four keys in the whole school. So that kind of means that you can't open the windows in some departments because you haven't got a key.”	“Sometimes they [the classrooms] are really warm and the windows don't open. None of the windows open. Only the lower ones. In the summer it's really hot” (Year 7 pupil.) Researcher 1: “Are there things you think the architect could have done better?” “Just the windows.”
ICT and computers	“All the computers are always on, they are never switched off by the power. They are always on standby. [...] it's just that the monitor is off. You just logoff and you don't shut it down”.	“In there [computer room] as well is the study centre [full of computers] and it gets very hot and even if the air con is on only slight areas get it and it gets very hot.”	“On hot days the IT suites are the best because of the air conditioning.”
Attitudes to energy efficiency and sustainability	“I think we should but we have gotten used to everything and don't want to go back to basics”	““I don't even think we are trying. It feels like they don't even think they care. But they are always banging on about it. They are always telling us to save energy but why not them”.	“...if no one moves in the classroom then the lights go out and so it's like when people go out of the room the lights go off and so the bills are lower. So do you think the bills are lower in this new school? You're paying less for your electricity and gas or not? Possibly not, because it's bigger.”
Natural and artificial light	“It happens [automatic lights switch on] when you go in, but when you go out everyone turns them off anyway. In PE that's what happens as they will go off in the changing rooms and in PE you just have to jump about a bit. In the store rooms it is straight on. You walk in and it just turns on. Cleaners' cupboards and stuff”.	“In the art and music corridor there are full size windows, they go down the full length of the building, the problem is that you have to, if you have projectors on in an art department you can't actually see because they don't have blinds so you can't actually lower the blinds so the projector can see so then you can't really see anything.”	“I think we should stop lighting the school in the day as the sun lights it up alot and we're wasting electricity” (Final 'design' session, Year 8 pupil).

Post Occupancy RESULTS

- 1. Contradictions between what adults say and what they tell children to do. A mismatch between designers intention and teachers ability to manage the behaviours of pupils – (many examples – dining biggest issue)**
- 2. Poorly functioning building features (windows, heating and ventilation systems, circulation, dining spaces) and either over provision or under provision of space and facilities, together with teachers prohibiting use of facilities (toilets locked).**
- 3. Lack of ownership of PFI buildings**
- 4. Lack of understanding of the 'sustainable' design features of the new school building – solar heating panels**
- 5. Convoluted facilities management procedures where prohibitions did nothing towards children establishing their own "authentic" relationship to the environment and a deep or lasting critical perspective on the problems of sustainable development.**

ORIGINAL RESEARCH QUESTION

Are there new ways of thinking, living and being emerging, demanding support from educationalists; and does the 'sustainable' school and its design, provide a testing ground for supporting changes in patterns of living?

- Children and young people have to have the right within our existing educational systems to be able to encounter all the complexities sustainability involves.
- Sustainability does not require behaviour change, but a critical engagement with living and being.
- It demands both ontological and political interrogation: what does it mean to be in an ethical or just relation to the environment and to other human beings? Who is this historical human being characterised so well by his/her exploitation of the natural environment and how do we understand his or her rights?
- The question of a sustainable lifestyle relates directly to the traditions of philosophical and political discourse and this cannot be absent from teaching in schools in the context of sustainable development.
- For architects it is a question not only building performance but engagement with the school community from design to post occupancy.

Dr Andrea Wheeler

Teaching and Learning Co-ordinator (Projects),
The Centre for Engineering & Design Education

a.s.wheeler@lboro.ac.uk

<http://www.sustainability-and-schools.com>