



What Got Us Here, Won't Get Us There

15th International Conference of the European Academy of Design
ONLINE and in PERSON in Brazil, Finland, India, Spain and the UK.
16-20 October 2023

Fashioning the Citizen Curriculum: A creative practice investigation into sustainable fashion education to promote engagement in responsible consumption and global citizenship.

Helen O'Sullivan
University of Portsmouth

Corresponding author e-mail: up2028364@myport.ac.uk

Abstract: While sustainability is central to many curriculums at Key Stage 4 (England and Wales, United Kingdom), there is no requirement to include this at KS3 design or below, resulting in most young people lacking the understanding of the impact clothes have. This research is a creative investigation into sustainability-focused fashion education with primary-aged children. The aim is to investigate the role of early education in promoting responsible consumption/citizenship. The longitudinal qualitative research involves monthly workshops with groups from varying demographics. The research investigates global production, exploring both the environmental and social inequality along the fashion supply chain, taking the participants on an imaginary and immersive journey. The transfer of knowledge is undertaken through animated cartoons, which cover the impacts, but also offer positive creative solutions undertaken during the sessions. It is anticipated the research will facilitate an understanding of clothing impacts, to help them become responsible global citizens of the future.

Keywords: Fashion, Sustainability, Education, Behaviour, Consumption

1. Introduction

This position paper is an overview of PhD work-in-progress currently being undertaken. It aims to discuss the context and justification for the research, while also providing a synopsis of methodological and pedagogical approaches, prior to full data analysis.

This research aims to determine whether early intervention creative education can promote environmental and cultural awareness and responsible consumption/citizen behaviour. It also aims to develop and test activities during the workshops, to develop a toolkit which could be adopted by educators within their own classrooms.

1.1 Rationale

The global fashion industry is one of the most damaging industries regarding its environmental and social impact (Environmental Audit Committee, 2019; Environmental Audit Committee, 2021). The issues are exacerbated by globalisation, the resulting increase of cheap imported garments and the ubiquitous culture of mass consumption in Western societies.

Despite the widely reported unsustainable practices of the fashion industry and some efforts to address the impact of the fashion industry (European Commission, 2021), it is commonly overlooked by the world governments aiming to address climate change and global responsibility. Likewise, there is often conflicting data and information surrounding the industry that needs to be urgently addressed (Markkula, et al. 2011), examples of which can be found in misleading statistics on water used for growing cotton (Transformers Foundation, 2021). There is also a strong contradiction between consumers' idealised morals and their actual behaviour practices, further exacerbated by discursive confusion, leading to the attitude behaviour gap (Jacobs, et al. 2017). Furthermore, there is a significant lack of consumer behaviour research (Welch, et al. 2015), particularly involving children and adolescents.

During my practice as a secondary school teacher of Design and Technology between 2016-2022, I attempted to address the environmental and social impact of the fashion industry through my teaching methods, drawing on my previous professional practice as a designer and fashion activist in my personal life. Yet, I faced persistent barriers in terms of actual behaviour displayed by pupils, clearly demonstrating the attitude behaviour gap.

2. Literature Review

2.1 Fashion

The fashion industry is accelerating beyond the needs of consumers, subsequently, our wardrobes are filled with 3.6 million tonnes of garments (WRAP, 2017). Compounding this are the issues of environmental devastation, the depletion of natural and finite resources and the direct exploitative implications to global communities which are deeply rooted in colonialism, required to manufacture, transport and use this clothing.

The Ellen McArthur Foundation estimates if our desire for cheap fashion continues, this will result in the industry being responsible for a quarter of the global carbon budget by 2050 (Ellen McArthur Foundation, 2017). Conversely, there are others who believe that the ecological impact of fast fashion has been greatly inflated, highlighting great disparities in scientific data (Wicker, 2020) and inconsistent advice from environmental and fashion activists (Greer, 2015). Markkula, et, al. (2011) claim, the volume of information and conflicting statistics (Transformers Foundation, 2021) and advice are adding to discursive confusion, ultimately inhibiting the acquisition of sustainable fashion. Despite this, the increase of non-governmental and charitable campaigns such as Fashion Revolution, Loved Clothes Last and the UN Alliance for Sustainable Fashion continue to highlight the planetary and humanitarian catastrophes of the industry.

2.2 Sustainable Fashion

Research and development have enabled advancements in fibre and material construction and despite increasing popularity, the lower demand and production of sustainable fashion means it is still expensive and unattainable for many (Environmental Audit Committee, 2019). Furthermore, the inability to tangibly define what sustainable fashion is and identify the prevalent greenwashing of brands adds to the list of barriers to responsible shopping habits (Hoskins, 2022; Armstrong et, al. 2016). Consequently, the “*formula fashion*” model (Fletcher, 2008 p.186) of fast fashion remains the dominator of the industry, possibly because it offers consumers something that sustainable options simply cannot: materialistic pleasure.

Undoubtedly consumption is woven into the fabric of our culture and “the acquisition of things, especially fashion goods like clothing, has become recreational and often replaces social engagement altogether” (Armstrong, et, al. 2016 p.2). Gupta, et, al. (2019) highlights the emotional turmoil this can create especially in younger people, whose obsession with image is exploited by the fashion industry. Their proposition echoes the concept by Gherasim, et, al. (2020), that young people seek control of their lives through consumption, yet the continuous desire and need for the latest fashions can lead to serious social and emotional health conditions. However, most of the studies including young people are of post-compulsory education age, signalling a lack of research with children and adolescents.

Reisch and Thøgersen (in Welch, et, al. 2015) indicate, behaviour science studies are of low priority among global governments, furthermore, they identify how crucial it is to focus on conducting research on how to make approaches to consumption sustainable. This is supported by Lorek, et, al. (2014), who state: *“research has hardly begun to investigate a possible and necessary societal transition to new and sustainable production and consumption systems”* (Lorek, et, al. 2014 p.28). Welch, et, al. (2015) advocates immediate global government action, to ensure research is mitigated to address these issues. Moreover, Jacobs, et, al. (2017) suggest specific research into the relationship and behaviour of consuming sustainable clothing purchases is also scarce. Spaargaren, et, al. (2000), additionally suggests consumption hasn't been given serious research among social and environmental scientists, as consumption is classed as a derivative of production, therefore not worthy of explicit research.

A key solution to this could be to re-establish the connection between the wearer and the garment. Willett et, al. (2022) investigated ways in which we connect to the clothes we wear to determine if users could engage in pro-environmental consumption. Following the study, many of the participants stated they applied more consideration to what they buy, and some reduced their overall consumption. However, many of the participants in their West Midlands (UK) study were previously employed as garment workers with existing knowledge of time and construction and it is therefore not clear if these changes in behaviour would apply to a broad spectrum.

The research has thus far demonstrated the need for accurate and effective information, awareness campaigns and initiatives that aim to truly address consumption should be supported (Kalamura, et, al. 2020). Likewise, Markkula, et, al. state: *“the need to better educate and empower consumers in taking active and meaningful roles in sustainable development still remains a major challenge”* (p.106). The role of awareness and education is a central recurrent theme, also advocated by Armstrong, et, al. (2016) who suggest a barrier to knowledge of sustainability being the key issue with fashion students.

While ecological awareness and sustainable consumption among the general population are reportedly becoming more prevalent, fuelled by young people and millennials (Bardey, et, al. 2022; Mohr, et, al. 2022; Advisor Hub, 2019; Lyst, 2019), there remains a significant behaviour paradox between what fashion consumers think, and what they ultimately do (Jacobs, et, al. 2017). This represents an attitude-behaviour-gap and a knowledge-to-action gap (Markkula, et al. 2011), as young people experience discursive confusion while trying to make sense of information.

2.3 Education

During 2019 the United Kingdom's Environmental Audit Committee (EAC here on in) published their report, which explores the role of consumers, but additionally, the crucial role educators play in fixing the fashion industry (Environmental Audit Committee, 2019). The EAC identified the need for education surrounding the issues of fashion, to be embedded not only within post-compulsory education but, specifically within compulsory school classrooms. They recommend *“lessons on designing, creating, mending and repairing clothes be included in schools at Key Stage 2 and 3”* (Environmental Audit Committee, 2019 p.59). The EAC also highlight the systemic undervaluing of design and artistic subjects at school, a sentiment echoed by Sir Ken Robinson, suggesting schools

are killing creativity (Robinson, 2015). Robinson also recommends educators cultivate young people's creativity to achieve a greater sense of purpose and also develop their critical thinking.

There is currently no government policy for teaching responsible fashion or design consumption throughout the design and technology National Curriculum, during Key Stages (KS) 1-3, reaffirming the general disinterest of governments highlighted previously (Jacobs et, al. 2017; Lorek, et, al. 2014; Reisch, et, al. 2015; Spaargaren, et, al. 2020). While sustainability is a central theme within the current GCSE in Design & Technology (KS4) within both England and Wales, there is no consistent requirement to teach this during the KS1-3. A key consequence of this is, learners who do not opt for GCSE Design and Technology, of which the numbers are steadily declining (DATA, 2022), therefore will not be taught, nor understand, how our clothing consumption choices affect the natural and social world around them.

In England, the KS1-2 specification only mentions the word *environment* in the context of a space (Department for Education, 2013a) and at KS3 it is mentioned only once (Department for Education, 2013b), but perhaps more worryingly, the words *sustainable* and *sustainability* are not mentioned at all, nor is *climate change*. However, the future is promising within Wales as the new curriculum launched in September 2022, notably embodying sustainability, and ethics across the whole curriculum (Welsh Government, 2020). The new curriculum has been developed in relation to Wales' Well-being of Future Generations Act 2015 (Future Generations, 2015) (and appointing a Future Generations Commissioner), which places equality, economy and ecology at the core of future legislation, including education provision. However, design has been removed entirely from the subject name, being replaced with *Science and Technology*. This is concerning as this could eradicate the links between design, consumption and environmental impact. Likewise, it could eliminate the empowering skills of creativity and the multitude of skills linked to design thinking discussed previously (Robinson, 2015). Furthermore, there is a significant lack of guidance on what and how to teach, and the responsibility and content largely falls on the individual teacher their own skills and values.

If teachers are responsible for designing their own curriculums with limited guidance or even training and support, this could lead to inconsistent sustainability content as they could be influenced by their own backgrounds, morals and values, also known as habitus. Habitus is a set of dispositions that influences one's perception, thought and action influencing how individuals relate to the social world (Bourdieu, 1989). Therefore, teachers' habitus informs their "*subjective stock of knowledge*" (Edgerton, et, al. 2014 p.201) and ultimately, those with strong environmental ethics could include deeper critical content than others with fewer environmental morals. Those with more critical knowledge could also be less likely to apply the *banking concept* of learning, thus enabling learners to proactively engage fully in society, politics and the globalised world (Freire, 1996).

Habitus can also affect learners, for example, learners from middle-class families often have an advantage over lower classes, as they have more access to resources and social, cultural and financial capital to inform their learning (Edgerton, et, al. 2014). However, habitus and cultural capital can be endlessly reformed and can raise or even lower, depending on knowledge construction (Bourdieu, 1989). In the context of fashion consumption, Markkula, et, al. (2011) state, "*different social and cultural contexts enable and constrain sustainable consumption practices in different ways*"

(Markkula, et, al. 2011 p.15). Therefore, educators have the responsibility to ensure all learners are exposed to consistent environmentally and socially responsible education to ensure learners' individual backgrounds, or habitus, are not perpetuating disadvantage but rather, encouraging personal engagement in global concerns and be pivotal in the development of the curriculum (Armstrong, et, al. 2016).

Another important issue is the conspicuous lack of primary design and technology provision within UK primary schools at KS1-2 (DATA, 2023). Reasons for this are largely due to the lack of expertise of primary teachers, teaching what is considered a specialist subject. Often projects are two-dimensional or for those involving practical skills, such as sewing, they rarely make connections between sewing and the stitches on our clothing. DATA (2023) suggests, primary school teachers need additional training to have confidence in teaching design and technology, but this is also the case at secondary level, with regards to designing for sustainability. While there is an abundance of global educational organisations such as FEE and Oxfam who have developed toolkits to assist teachers to incorporate sustainability within their curriculums, there is a substantial lack consideration of fashion, textiles and design education, yet again reiterating the scarcity of knowledge and research into the seriousness the fashion industry has on the environment (Environmental Audit Committee, 2019; WWD, 2020).

Furthermore, research has shown that there is a lack of research focused on young people in general, but particularly with young people across class structures with vast differences in habitus.

3. Research Practice

3.1 Research Methods

This research methodology is qualitative, adopting a range of methods which have been selected specifically for co-researching alongside the young contributors/participants and their parents/guardians. All participants are asked a series of questions prior to and following the workshops, to measure not only their own development, but also the potential impact of the study. The families create textiles-based artefacts linked to a theme featured in several 5-minute animated cartoons (see Figures 1 and 2), along the global fashion supply chain, documenting their knowledge and creative work through sketchbooks. The use of cartoons to explain complex information to the children and their families is selected for two key reasons: Firstly, it will allow the topics to be presented in an age-appropriate and visually appealing form, and secondly, it allows the researcher to move away from a teacher/instructor and observe the viewers responses in real-time.

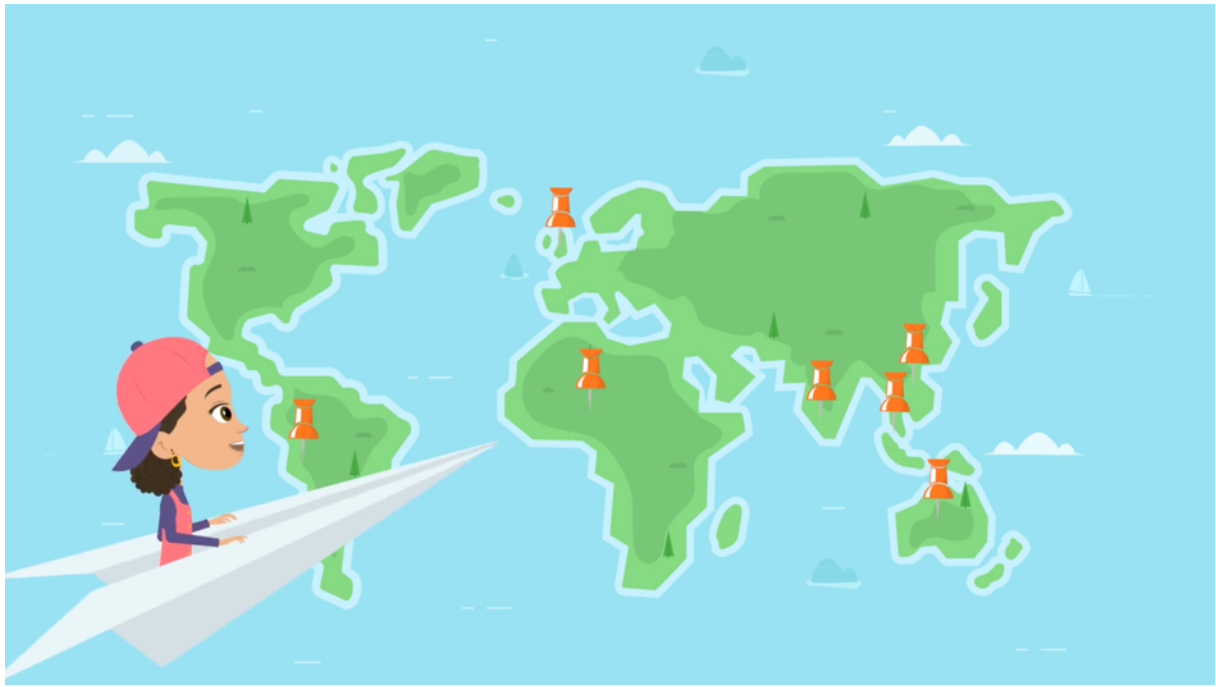


Figure 1. A still image of the animated cartoon with locations of the fashion supply chain – the focus of each session.
Image Credit: Authors own.



Figure 2. An animated cartoon still shows Cambodian garment workers, the majority being female.
Image Credit: Authors own.

Qualitative methodologies have been carefully considered as they allow researchers to encourage practical engagement, to crucially pay attention to children's language and to analyse the critical meanings behind this language (Christensen, P. et al. 2017). By adopting a holistic qualitative approach when researching within the family unit, researchers can offer greater diversity in methods and perspectives, compared to quantitative techniques (Greenstein, 2011) to help the researcher to understand meanings to inform their own interpretations.

The research involves a qualitative longitudinal practice-based study spanning over 2 years (phases one and two). The length of the study will also facilitate long-term relationships with not just the children, but importantly the parents/guardians. Longitudinal research also allows researchers to advance a deeper understanding of social norms, cultural capital, families' backgrounds and participant experiences (Coe, et al. 2021).

A significant part of the research data is in the form of overt observations such as video/audio recordings and observation sheets of the social engagement, co-construction of knowledge and creation. Dialogic reflexivity is also essential for all participants, who move from passive learners/respondents to becoming active interpreters of the research through interaction with the information presented to them. Everyone is encouraged to use dialogue to express their own learning, understanding and emotions in response to each theme/topic. A method of encouraging this dialogue with the children is the use of reflective comic book-style activity sheets, which feature still images taken from the cartoons (see Figure 3). Children are asked to summarise what each image is about, how that made them feel and any other comments they may have.

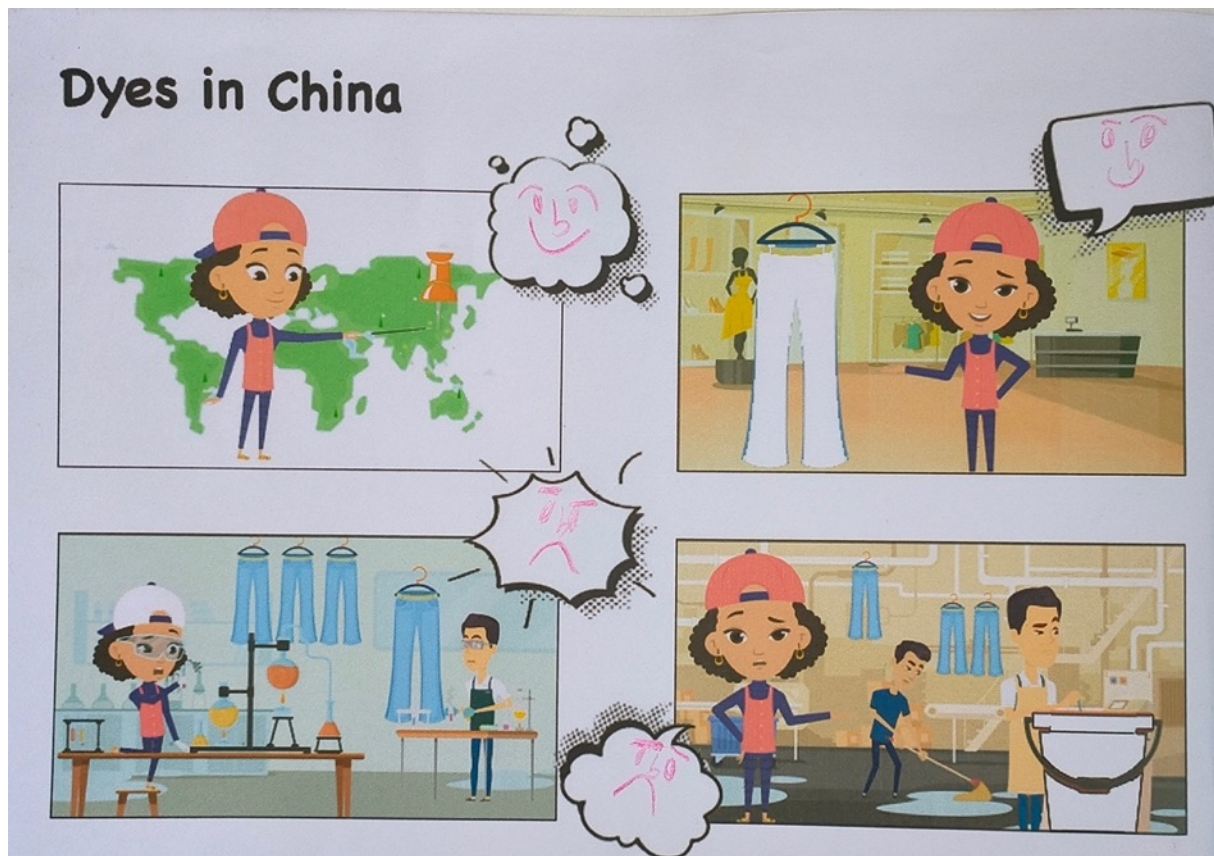


Figure 3. Comic book style activity used as a reflective recap of previous workshops.
Image Credit: Authors own.

Video recordings of the study can facilitate effective narrative and dialogic data analysis, as many conversations may be missed if observation notes are the only form of data collection. The recording of video/audio can also assist researchers in their analysis of the critical meanings behind the language used, but furthermore, enable the researcher to remember the wider context in which that language was used (Edwards, 2018).

The workshops creatively document the participant's fashion and sustainability journey through the creation of artefacts such as sewn items, textile decoration and manipulation, accessories, and reflective activity sheets.

3.2 Participants & Research Ethics

This child-centred research practice is primarily aimed at children, but also their parents/guardians. Therefore, due to its nature, it involved a rigorous peer review and ethical approval process, from the University of Portsmouth's ethical committee, prior to commencement. As part of this ethical process and due to the nature of the study, the children were placed at the heart of the consent and planning process. To ensure children feel valued and in control, all children have provided child assent (see Figure 4), following parental/guardian informed consent.

Colour in each section to agree.
Green for Yes.
Red for no.

1 The project has been explained to me by Helen and my parent/carer.

2 I know that I can stop taking part at any time and that is ok.

3 I am happy to be recorded in a video while I'm making work.

4 I understand that all work that I create is mine to take home and keep.

5 But I will let Helen take photographs of my work.

6 I am happy for Helen to use quotes of what I say.

7 I understand that some of my work will be shared with other people.

8 I agree to take part in the project.
(Tick the box 'Yes')

Yes No

Name of Participant: Elly Boyan Date: 12/10/22 Signature: E. B.

Name of Researcher: Helen O'Sullivan Date: 12/10/22 Signature: H. O.

Figure 4. Image showing the assent activity form to be completed by child participants prior to research. Image Credit: Authors own.

The research ethics process also facilitated meticulous planning for approaching some of the more problematic and emotive content, such as garment worker exploitation. As a result, the use of cartoons was adopted to present the sensitive content in a non-graphic and child-friendly manner. This thorough planning also allowed exploration of activities that are suitable for the whole families, ensuring the active engagement of parents and family members in addition to the children.

The practice involves working with a broad range of children and families with different socioeconomic backgrounds and seeks to address the social desirability and attribution bias of affluent and educated groups being assumed as more inclined to adopt greener lifestyle (Armstrong, 2016; Jacobs, et al. 2017). It aims to address this by using the population of children entitled to free school meals (eFSM) as a locality selection tool, as this is used within UK education provision as a national marker of poverty and academic attainment. For reference, the Wales average school population of eFSM children is 19% and this study will work with groups in areas of 1.5% and 55% of eFSM entitlement (Estyn, 2016; Estyn, 2017a; Estyn, 2017b). It will also ensure that all participants will have access to consistent environmental awareness about global issues, regardless of their education or background.

3.2 Practice

By underpinning the theoretical work of Vygotsky's social constructivist theory (1978) and Freire's dialogic and critical consciousness model of education (1996), it is hypothesised that the children and their parents/guardians will gain a rich education, connecting them to the global community on a personal and social level. According to Vygotsky (1978), children and adolescents are highly social beings, therefore describing learning as a profoundly social process and suggest experiential group work can lead to mediated cognitive growth. This is a view supported by Armstrong et, al. (2016): *"experiential learning is a common pedagogical approach cited often in the sustainability education literature, as it prompts personal and active engagement with complex, real-world problems"* (pg. 423). Furthermore, Edwards' (2018) work within dialogic research with young people, supports the work of Freire and Vygotsky, suggesting humans co-construct knowledge through relational activity and discussion. Additionally, Robinson (2015) recommends educators must cultivate young people's creativity to achieve a greater sense of purpose and to also develop their critical thinking. It is therefore, anticipated that creative sustainability-focused and social education at an early age may moderate the burden of peer pressure or learned behaviour in relation to consumption. Similarly, Armstrong et, al. recommends *"Future curriculum must help learners confront this consumer culture, specifically highlighting the individual, social, and cultural drivers of consumption"* (2016, pg.434).

The research involves creative textiles-based workshops in different locations across the city of Swansea in Wales, United Kingdom. Each workshop lasts approximately 2 hours, with children and their parents/guardians. There are eight sessions per group across the (phase one) year exploring 7 key locations, impacts and creative solutions along the global fashion supply chain (see Table 1).

Table 1. Overview of Phase One Workshops.

Workshop	Theme Issues	Theme Solutions
1: UK	Overview of the issues resulting from fashion.	Creation of superhero ragdolls based on individual personas.
2: Africa	Cotton farming, pesticides, water use and local communities.	Organic cotton, printing Sankofa prints onto cotton, stitching Sankofa symbols.
3: China	The use of chemical dyes, water effluent and impact on local communities.	Creating natural mordants and dyes using vinegar and turmeric. Tie dye of fabrics and cushion cover.
4: India	Weaving of fabrics using power looms and rural handloom weaving in rural communities.	Using a handloom to create a fabric using scrap fabrics and materials.
5: Cambodia	Exploring the exploitation of garment workers in Cambodia.	Introduction to Fashion Revolution, printing, and stitching protest banner squares.
6: Australia	The decline in traditional and indigenous skills and textile crafts.	Creating batik inspired prints and fabrics – including customising second-hand clothes.
7: UK & Chile	The impact our clothes have during the use phase. The impact of overproduction and textile waste in the Atacama Desert.	Exploring ways to maintain clothes such as washing and repair. Keeping clothes and fabrics in use for longer through upcycling clothes into accessories.
8: MAKE IMPACT	Exploring all issues over the previous 7 sessions.	Co-creating a patchwork fabric using messages exploring the previous themes. Collaborative making of a garment from the patchwork fabric with impactful messages.
EXTRA: Focus Group Session	Revisiting the study (summer 2023). (online -focus group)	Summative focus group interviews discussing the personal impact of the study and potential changes in behaviour.

4. Research Progress

The study is currently at the end of phase one of the workshops. Despite being early in the study, initial data analysis demonstrates clear signs of teacher habitus reflecting what is taught in classrooms and a distinct difference in vocabulary and sustainability knowledge between groups. Additionally, the children are starting to make emotive connections between themselves, the people who make their clothes and the impact on the natural world all while creating.

4.1 Research Methods

During the initial sessions, participants were asked a series of questions to identify both their pre-existing knowledge and skills, and as a method of comparative analysis following a summative interview in the summer. These questions were asked during the introductory activity of creating their own superhero persona ragdolls (see figure 5). The participants were asked a range of questions based on their own shopping habits, such as place and frequency, in addition to questions based on skills in repair, maintenance and making. Participants were also asked questions based on vocabulary to value their understanding of the meaning of words such as *environment* and *sustainability*. These findings will then be analysed following the focus group session in the summer, to measure the potential social, behavioural and awareness-building impact of the study.



Figure 5. Superhero persona ragdolls created by the children.
Image Credit: Authors own.



Figure 6. Participants stitched a Sankofa symbol Christmas bauble, representing wisdom and creativity.
Image Credit: Authors own.



Figure 7. Participants creating tie-dye samples using turmeric dye as a solution to chemical dyes used in China.
Image Credit: Authors own.

4.2 Meaning Making

A key method to facilitate connections with the information and themselves, is the comic strip activity sheets (see Figure 3, page 8). During a recap of workshop 3, which introduced chemical dye use in China, Jack aged 9 said the image of people drinking water made him sad, *"because they were getting ill and the water they were drinking was this [points to dye effluent image]"*. While another child, Amy aged 7 raised concerns over her own tie-dye kit at home, not knowing what type of chemicals it may contain or *"if it was made from turmeric and plants"*, as our activity did (see Figure 7).

Participants are also beginning to make links between various impacts and topics, and notably are asking critical questions, which even adults may struggle with. For example, when creating her hand-woven sample (see Figure 8) during workshop 4, Amy aged 7, prompted the following conversation:

Amy: *"Does sustainable mean handmade?"*

Researcher: *"It can do. A lot of things that are handmade are sustainable because..."*

Eryn: *"Because they don't use steam and carbon dioxide!"*

Researcher: *"Wow! That's right, you guys know more than me!"*

This conversation between the children explored deeply the need to reduce our consumption due to the impact on the planet and all its inhabitants.



Figure 8. Weaving their own fabric prompting a crucial question: *"does sustainable mean handmade?"*. Image Credit: Authors own.

The fifth session explored garment worker exploitation, and through the data collected it would appear the families found this to be a very emotive, yet empowering topic. The activity was to create a protest banner for Fashion Revolution (see Figure 9) and the children decided to paint messages onto fabric using fabric paints. They decided what they wanted to convey, including messages of support to garment workers and messages of abhorrence to fast-fashion CEO's.



Figure 9. Fashion Revolution collaboration banner.
Image Credit: Authors own.

Many of the messages were to the garment workers thanking them for making their clothes and smiley emojis to make them happy. However, some took a slightly darker twist: More specifically, Ellis aged 7 and Jack aged 9, painted demands and warnings for the CEOs, Ellis even threatened to set the Teenage Mutant Ninja Turtles on the boss if he didn't pay up (see Figure 10). This activity effectively allowed the children to demonstrate how they felt about the injustice and use their voices to make a change in the industry.



Figure 10. Demanding messages for the fast-fashion CEO bosses, by Jack aged 9 and Ellis aged 7.
Image Credit: Authors own.

4.3 Reflections and Citizen Fashion Action

The final session of phase one, explored the entire 9 months of issues and solutions, with the families creating a patchwork fabric with messages about what they have learned and experienced. All participants then worked collaboratively to construct the Citizen Fashion Dress (see Figures 11 and 12), which documented the impact of fashion and messages on how to action change. Each participant painted squares of fabric, and then worked together to place, pin and sew the squares to create a patchwork fabric. This was then transformed into a dress. Key messages include:

Amy: "No more fast fashion"

Eryn: "Don't lose it, reuse it"

Jack: "Pay workers more"

An additional focus group session, due to take place during the United Kingdom summer holidays, will involve the summative questions, linked to those at the start of the study. This will allow me to measure the impact of the study and assess whether any changes in behaviour, knowledge or awareness have occurred. All data will then be analysed during the coming months.



Figure 11. Collaboratively creating the Citizen Fashion Dress.
Image Credit: Authors own.



Figure 12. The Citizen Fashion Dress.
Image Credit: Authors own.

5. Discussion & Conclusions

While the research is ongoing, the study is beginning to demonstrate the role education plays in increasing environmental and social awareness and behaviour change, through the promotion of environmentally and socially responsible behaviour. The child-centred approach of this study, the research methods adopted and the identified gaps in current research and literature, justify a unique contribution to knowledge.

The research has already started to re-establish the connection between the families and their clothes through embodied learning. The sessions have allowed the children and their families to engage in real-world issues developing their critical thinking and critical consciousness while crafting positive solutions. Therefore, it is expected the research could be used as an evidence base for the need to drastically change our approach to fashion/design education to ensure we overcome the mistakes of the past.

It is anticipated this research will demonstrate the role compulsory and consistent sustainable design education at a strategic level can play in raising awareness of global fashion issues. The resources developed and tested throughout phase one will be trialled within primary school settings, to analyse the feasibility with large groups and wider social impact. School-based trials are planned for the autumn term of 2023.

References

- Advisor Hub (2019) *Sustainability vs. fast fashion – the war for millennials*, Available from: <https://www.adviser-hub.co.uk/sustainability-vs-fast-fashion-the-war-for-millennials/> (Accessed March 2023)
- Armstrong, C, M, J., Connell, K, Y, H., Lang, C., Ruppert-Stroescu, M. and LeHew, M, L, A. (2016) *Educating for Sustainable Fashion: Using Clothing Acquisition Abstinence to Explore Sustainable Consumption and Life Beyond Growth*, Springer Science+Business Media New York
- Bardey, A. (2022) 'Finding yourself in your wardrobe: An exploratory study of lived experiences with a capsule wardrobe', *International Journal of Market Research*, 64(1), pp. 113–131. doi:10.1177/1470785321993743.
- Bourdieu, P. (1989) 'Social space and symbolic power', *Sociological Theory*, Vol. 7, No. 1 (Spring, 1989), pp. 14-25.
- Christensen, P, & James, A. (eds) (2017), *Research with Children: Perspectives and Practices*, Taylor & Francis Group, London
- Coe, R., Warring, M., Hedges, L, V., Ashley, L, D. (eds) (2021), *Research Methods and Methodologies In Education*, SAGE Publications Ltd, London.
- DATA: Design and Technology Association (2022) *New report - D&T in schools fallen over last decade and will continue without government intervention*, Available from: <https://www.designtechnology.org.uk/news/new-report-dt-in-schools-fallen-over-last-decade-and-will-continue-without-government-intervention/> (Accessed March 2023)
- DATA: Design and Technology Association (2023) *New primary curriculum*, Available from: <https://www.designtechnology.org.uk/for-education/primary/membership/primary-curriculum/> (Accessed March 2023)
- Department for Education (2013a) *Design and technology programmes of study: key stages 1 and 2*, Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239041/PRIMARY_national_curriculum_-_Design_and_technology.pdf (Accessed March 2023)
- Department for Education (2013b) *Design and technology programmes of study: key stage 3*, Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239089/SECONDARY_national_curriculum_-_Design_and_technology.pdf (Accessed March 2023)
- Edgerton, J. D. and Roberts, L. W. (2014) 'Cultural capital or habitus? Bourdieu and beyond in the explanation of enduring educational inequality', *Theory and Research in Education*, vol. 12, no. 2, pp. 193–220.
- Edwards, S. (2018) *Re-engaging young people with education: The steps after disengagement and Exclusion*, London, Palgrave Macmillan
- Ellen McArthur Foundation (2017) *A new textiles economy: Redesigning fashion's future*, Available from: <http://www.ellenmacarthurfoundation.org/publications> (Accessed March 2023)
- Environmental Audit Committee (2019) *Fixing Fashion*, London, House of Commons
- Environmental Audit Committee (2021) *Fixing fashion: follow up*, Available from: <https://committees.parliament.uk/work/654/fixing-fashion-follow-up/> (Accessed March 2023)
- ESTYN (2016) *Inspection report for Knelston Primary School*, Available from: <https://www.estyn.gov.wales/system/files/2020-08/Knelston%2520Primary%2520School%2520en.pdf> (Accessed March 2023)
- ESTYN (2017a) *Inspection report for Sea View Community Primary School*, Available from: <https://www.estyn.gov.wales/system/files/2020-08/Sea%2520View%2520Community%2520Primary%2520School.pdf> (Accessed March 2023)

- ESTYN (2017b) *Inspection report for Llanrhidian Primary School*, Available from: <https://www.estyn.gov.wales/system/files/2020-08/Llanrhidian%2520Primary%2520School.pdf> (Accessed March 2023)
- European Commission (2021) EU Strategy for sustainable textiles, Available from: <https://committees.parliament.uk/work/654/fixing-fashion-follow-up/> (Accessed March 2023)
- Fletcher, K. (2008) *Sustainable fashion and textiles*, London, Earthscan Publications
- Freire, P. (1996) *Pedagogy of the oppressed*, London, Penguin Group
- Future Generations (2015) *Wellbeing of future generations (Wales) Act 2015*, Available from: <https://www.futuregenerations.wales/about-us/future-generations-act/> (Accessed March 2023)
- Gherasim, D. and Gherasim, A. (2020) 'Motivation and Purchase Behaviour', *Economy Transdisciplinarity Cognition*, 23(2), pp. 109–116. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=148237186&site=eds-live> (Accessed March 2023)
- Greenstein, T. N. (2011), *Studying Families: Qualitative Methods*, SAGE Publications Inc, Thousand Oaks.
- Greer, L. (2015) *BOF: Op-Ed - Remove Toxic Chemicals and Fabrics from Fashion's Supply Chain*, Available from: <https://www.businessoffashion.com/opinions/sustainability/remove-toxic-chemicals-fabrics-fashions-supply-chain/> (Accessed March 2023)
- Hoskins, T. (2014) *Stitched up: The anti-capitalist book of fashion*, London, Pluto Press
- Hoskins, T. (2022) *The anti-capitalist book of fashion*, London, Pluto Press
- Jacobs, K., Petersen, L., Hörisch, J. and Battenfeld, D (2017). Green thinking but thoughtless buying? An empirical extension of the value-attitude-behaviour hierarchy in sustainable clothing. Faculty of Business Management, Alanus University of Arts and Social Sciences, Villerstrasse 3, 53347, Alfter, Germany
- Kalambura, S., Pedro, S. and Paixão, S. (2020) 'Fast Fashion – Sustainability and Climate Change: A comparative study of Portugal and Croatia', *Sociianlna Ekologiia*, 29(2), pp. 269-291. Doi: 10.17234/SocEkol.29.2.6
- Lorek, S and Vergragt, P, J. (2014). Sustainable consumption as a systemic challenge: inter- and transdisciplinary research and research questions. Handbook of research on sustainable consumption
- Lyst (2019) *Year in fashion*, Available from: <http://www.lyst.co.uk/year-in-fashion-2019/> (Accessed March 2023)
- Markkula, A. and Moisander, J (2011). Discursive Confusion over Sustainable Consumption: A Discursive Perspective on the Perplexity of Marketplace Knowledge. Springer Science+Business Media, LLC.
- Mohr, I., Fuxman, L. and Mahmoud, A.B. (2022) 'A triple-trickle theory for sustainable fashion adoption: the rise of a luxury trend', *Journal of Fashion Marketing & Management*, 26(4), pp. 640–660. doi:10.1108/JFMM-03-2021-0060.
- Robinson, K. (2015) *Creative schools: Revolutionizing education from the ground up*, London, Penguin
- Spaargaren, G. and Van Vliet, B (2000), 'Lifestyles, consumption and the environment', *Environmental Politics*, 9 (1), 50–76.
- Transformers Foundation (2021) *Cotton: A case study for misinformation*, Available from: <https://www.transformersfoundation.org/cotton-report-2021> (Accessed March 2023)
- Vygotsky, L. S. (1978) *Mind in society*, Cambridge, Harvard University Press
- Welch, D., Warde, A., Reisch, L. (Ed.), & Thøgersen, J. (Ed.) (2015). *Theories of Practice and Sustainable Consumption*. In *Handbook of Research on Sustainable Consumption* (pp. 84-100). Cheltenham UK: Edward Elgar Publishing Ltd.

Wicker, A. (2020) *VOX: Fashion has a misinformation problem. That's bad for the environment*, Available from: <https://www.vox.com/the-goods/2020/1/27/21080107/fashion-environment-facts-statistics-impact> (Accessed March 2023)

Willett, J., Saunder, C., Hackney, F. and Hill, K. (2022). The affective economy and fast fashion: Materiality, embodied learning and developing a sensibility for sustainable clothing. *Journal of Material Culture*

WRAP (2017) *Valuing Our Clothes: the cost of UK fashion*, Available from: https://wrap.org.uk/sites/default/files/2020-10/WRAP-valuing-our-clothes-the-cost-of-uk-fashion_WRAP.pdf (Accessed March 2023)

WWD: Women's Wear Daily (2020) *'New Standard Institute Issues "Roadmap for the Rebuild": The organisation founded by Maxine Bédar addresses the roles of citizens, media and companies in lessening fashion's environmental impact'*, Available from <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=146331186&site=eds-live> (Accessed March 2023)

About the Authors:

Helen O'Sullivan is a PhD candidate at the University of Portsmouth, United Kingdom, her primary research interests are sustainable fashion and education. She is a fashion lecturer, a former secondary school teacher, the founder of SustFashWales and is based in Wales, UK.

Acknowledgements: I would like to acknowledge the ongoing support of my current PhD supervisors Dr Elaine Igoe and Dr Matthew Anderson, and the continued support from my previous supervisors, Dr Sianne Gordon-Wilson and Dr Catherine Carroll-Meehan. I would especially like to thank the children and their families for actively and enthusiastically engaging with the research, without whom, this would not be possible.