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# ARTICLE Challenging Excessive Fashion Consumption by Fostering Skill-Based Fashion Education

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ARTICLE INFO	ABSTRACT
Article history Received: 15 <sup>th</sup> November 2018 Accepted: 13 <sup>th</sup> March 2019 Published: 26 <sup>th</sup> March 2019	Academic arguments that fashion consumption habits need to change in order to support a more sustainable future are well established. This work explores a participatory design dress making methodology as a vehicle to trigger positive change in younger fashion consumers and help stem an attraction to fast fashion products. A key outcome of the study is that engagement in garment design and construction invoked an apparent pos- itive emotional attachment not typically evident in fast fashion purchases. Participants demonstrated positive attitudes towards sustainability, along- side an awareness of the negative impact of fashion waste. However, at a relatively young age their evolving consumer habits show them to be drawn into the social drivers that are inherent in the idea of fast fashion. The perceived value of the work is the willingness of the students to participate. The apparent satisfaction they felt in their achievements and most significantly, their enthusiasm to continue with making. If this same enthusiasm could be captured in a new imagining of fashion and retailing the values of quality, longevity and individuality can remerge as the fash- ion ideal.
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## 1. Introduction

The tensions between fast fashion and the conflicting desires for sustainability have been under scrutiny since the early 1990s. Despite many worthy initiatives, slow fashion and sustainable consumption have often been viewed as mere fanciful hopes. Cursory adoption policies and a limited commitment by the mainstream fashion world appear to have been the cause<sup>[1]</sup>. Equally problematic is the growing evidence in attempts to engage consumers in changing their buying habits. Amongst such a complex array of interrelated issues and priorities, people are left believing that the individual's impact is small and therefore pointless. This demonstrates how conflicting views on the subject matter can create confusion and hence counter-productivity. The objective of this work is to explore education and the development of traditional sewing skills as a means to offer school age consumers options as to how they choose to engage with the challenges of fast fashion consumerism.

Rather than attempting to challenge mind-sets already rooted in cycles of mass-consumption and fast fashion, this work looks to build on research exploring the potential to instigate a stronger personal attachment to garments by educating younger consumers. Ideally finding new

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ways to encourage a sense of irreplaceability, seldom identified within typical fast fashion purchases. One of the challenges circumnavigated in this research was an underlying need for dressmaking skills. In an earlier study Hirscher and Niinimäki<sup>[2]</sup> worked with 'pre-made' tunics offered to participants under the concept of 'half-made' to be customised by the individual. More recently Martin<sup>[3]</sup> addressed the same skills gap via the use of simplistic geometric shapes to create garments. The idea driving this new study, is that the use of a simple dressmaking technique, in conjunction with a participatory design culture, can help create a positive emotional attachment to the resultant garment; an experience that could potentially result in a longer life span of the garment, hence ideally reducing the desire to discard clothing and consume more.

#### 2. Literature Review

#### 2.1 Sustainable Fashion

Ideologies fostering sustainability were initiated during the 60s and continued to evolve through the 70s and 80s. The ideas then gained greater recognition in the 90s, post the perceived excesses of the 80s<sup>[4]</sup>. Regardless of any perceived negativity towards mass-consumption fashion brands, retailers continued to instigate and actively encourage consumerism by capitalising on the lower manufacturing cost afforded through globalisation strategies. Significantly for this study, Fletcher<sup>[5]</sup> identifies a distinct change in consumer attitudes during the economic growth of the 80s, leaving behind the values of the previous decade, quality, longevity and individuality. Throughout the last decade, consumer expectations are seen to have shifted to an ever-growing desire for cheap and convenient fashion, which is arguably becoming the ultimate obstacle to sustainability.

Nevertheless, the extent to which these shifts in consumer desire are the drivers for fast-fashion is difficult to know. The goal of manufacturing efficiency in itself is not new; 20<sup>th</sup> century economic theories such as 'Fordism' and 'Taylorism' are well recognised as catalysts of mass-production methodologies. Although these examples are born from the automotive and armaments sectors, the methods have been adopted across many industries. More prevalent in the fast fashion industry however, is that low costs are seemingly accepted as being synonymous with lower quality and the idea of 'functional obsolescence' is well established i.e. products with a deliberately short lifespan<sup>[6]</sup>. Perhaps, these are accepted characteristics of trend-driven clothing consumption, and a further highlight of the self-fulfilling 'fastness' of fast fashion, and the creation of desirable easy-to-consume, easy-to-replace products.

#### 2.2 Slow Culture and Wellbeing

Counter to the values offered by the temporal satisfaction of consumerism and the culture of convenience, is the emerging idea of 'Slow', a culture that favours quality over quantity. Here a useful channel for parallel consideration is the food industry. When fast-food chain McDonald's opened a franchise in Rome, culinary writer Carlo Petrini began 'Slow Food' in protest against the rise of fast food culture. The ethos of the movement maintains: "A firm defence of quiet material pleasure is the only way to oppose the universal folly of Fast Life"<sup>[7]</sup>. The movement has gained a significant following across the globe and despite originating in the food industry, 'Slow' has since become a widespread concept defined by greater importance being placed on quality focused manufacturing processes. and investing in commodities that will withstand the test of time<sup>[5]</sup>. Minney<sup>[8]</sup> extends the ideals for slow fashion manufacturing by placing 'design, and therefore the designer, at the heart of the sustainable agenda, encouraging a 'mindfulness' approach across the whole supply chain.

A shift in the prioritisation of 'wellbeing' for consumers also offers some interesting parallels to consider. Again, linked to the food industry, the value of the comparison is the success achieved in changing purchasing habits from the pursuit of convenience to a positive change in lifestyle. An aim for change that is more about delivering a clear and direct value to the individual concerned, as opposed to a broader agenda more located in a sense of greater good. Statistics show that between 2012 and 2017 the 'Market Value of Health and Wellness' increased from just over 22 billion to nearly 25 billion Euros<sup>[9]</sup>. This indicates a shift from consuming convenient/fast and usually processed foods, to increased time spent exercising. The individual can directly feel the benefits of increased exercise and consumption of healthy food. For example, research suggests that time spent on personal health and wellbeing, results in higher self-value<sup>[10]</sup>. Further evidence that education can support a positive social impact can be seen in changing attitudes to tobacco and alcohol consumption<sup>[11][12]</sup>. Research shows significant reduction in younger age groups taking up smoking and alcohol particularly noted amongst sub-groups characterised by those with high physical activity, good mental health and in fulltime education or employment. A question driving this research is how to redirect the level of 'self-value' away from shopping for homogenised and expendable clothing, and to channel it towards a desire for individual expression realised through the experience of participatory design.

#### 2.3 Fashion Consumption

The shopping experience, from one perspective is exciting and engulfed by feelings of personal satisfaction, deeming ethics and the environment a lesser issue when buying fashion<sup>[1]</sup>. Equally, clothing functions for individuals in that it 'protects' the human body from the elements<sup>[13]</sup>. The latter is a simple material need, however, the arguably more reflective, driven and non-material needs include more sophisticated concepts; for example identity, participation, recreation and freedom, are often materialised in a fashion form<sup>[5]</sup> In other words, the complex needs/motivation of individuals often depend on external factors (the consumption of products) to be satisfied<sup>[14]</sup>.

While the constant proliferation of new fashion trends facilitates a seemingly endless progression of consumer aspiration, the positive feeling associated with such behaviours is evidenced to often be a short-lived experience. The work of Van Bowen<sup>[15]</sup> exposed the acquisition of material goods as leaving consumers feeling ultimately dissatisfied; any initial positivity is short lived generating a need for the feeling to be replaced with yet newer purchases. A self-perpetuating cycle, which has been described as one that oscillates between desire and disappointment, the initial love of a garment quickly transforms into discontent as its original appeal deteriorates<sup>[6]</sup>. A change to be addressed within this cycle is the anonymity of the consumer and their distance from the garments' manufacture that leaves an unbridgeable gap. Any potential receptiveness to the benefits of wearing a well made, and ethically sourced garment are not sufficiently tangible or real enough to encourage a genuine feeling of responsibility<sup>[16]</sup>.

One of the reasons the external value of fashion items hold such personal appeal is social standing; the idea of being sufficiently skilled to make your own clothing, has some potential to be seen as aspirational. In the educational setting, the uptake of a skill is presented as an opportunity for further knowledge and offers a potential career pathway. Further, in an environment where such a skill is practised from the beginning of a school career, by the time a pupil leaves school they could be proficient enough to continue developing this skill. Therefore, the process of making, if practised regularly, has the potential staying power to create behavioural change<sup>[17]</sup>. Such thinking suggests that developing the skills of the consumer, to engage with the process of making/fashioning their own garments, has arguably some potential to challenge the cycle of consumerism<sup>[18]</sup>.

#### 2.4 Participatory Design

In this study, a participatory workshop is designed to encourage making skills specifically for an age group typically at an early stage of their fashion consumerism. The idea is to initiate the use of their skillset to fulfil their needs, as opposed to being entrenched in the habit of relying on a bought product. In such an environment, skillset development is presented as a longer lasting personal gain than the temporary gain felt after purchasing a product. Once an individual becomes proficient, the skillset can continuously be of benefit, and time spent engaging with the process can be recognised as worthwhile<sup>[17]</sup>.

Beyond the skills value, there are other perceived benefits to be gained from engaging in participatory design; such experiences are understood to be a key component in unifying consumers with products. User participation creates a story that maintains a place in an individual's memory. The active participation in making a garment can establish a person-product relationship, therefore extending the life of the product<sup>[19]</sup>. Enjoyment and an accumulation of memories create a positive attachment to a product, increase the potential longevity, and indirectly promote more sustainable buying behaviour<sup>[20][21]</sup>.

There are many arguments for the need to move the fashion industry towards a more sustainable future, as well as a necessity for our apparel buying choices to change. However, there is also a growing recognition that the aim must shift from trying to recondition current consumer habits. This approach is making little headway in the current retail environment, so there is consequently good reason to explore new approaches. Specifically, with an aim to refocus any satisfaction gained from the shopping experience, and instigate new methods of sustaining inherent human needs for creative interaction<sup>[22][1]</sup>. The process of active learning in dressmaking skills that Martin<sup>[3]</sup> proposes, echoes the 'Life of Action' expressed by Illich<sup>[23]</sup>. Individuals have the capacity to choose whether they buy items, or the freedom to make and use them. Here, active participation and interaction with personal power is perceived. The idea that developing dressmaking skills provides a more long-standing personal gain compared with the gain felt through the passive consumption of goods is also supported. Chapman<sup>[6]</sup> offers conclusions on how better design can produce product that people desire to keep for longer. Uncertainty still exists about the relationships between participation, increased emotional attachment and reduced consumption. However, there is no apparent evidence of previous studies employing a basic dressmaking method, in a paradigm that explores potential benefits for young teenagers. This work seeks to gain further insight into participatory design in a fashion context. Through the use of basic dress pattern shapes, it will explore self-sufficiency, self-worth, adventure and sustainability, using Martin's method as a vehicle to make clothing for all unique body types.

#### 2.5 Nudge Theory

Actively learning how to make our own clothing gives individuals more options and opportunity to better explore self-expression<sup>[3]</sup>. In defining the role of the designer, we establish that to design is to provide solutions in order to take us from a current situation onto the next one<sup>[24]</sup>. Arguably, knowledge of this aspect of design is fundamental for a sustainable future. "The Design Council reported that 80 per cent of a product's environmental impact is decided at the design stage"<sup>[25]</sup>. Waste can be argued as essentially a design flaw, making the education of the designer, maker, and user, regarding this challenge, a crucial step in encouraging change. In the context of this study, the important objective is to create positive reinforcement, and a sense of achievement in the acquisition of new skills. The aim is to present individuals with the means to make their own clothing, and in line with Nudge Theory<sup>[26]</sup>, not radically change their habit by prohibiting them from buying garments. Instead the aim is to present an alternative way to create incremental changes in the drive towards a more sustainable future in fashion. Furthermore, consumption habits are known to relate to how individuals present their values, and how they want them to come to fruition<sup>[8]</sup>. The values of a commitment to developing dressmaking skills could instil dedication, patience, criticality and independence. Essentially, this study sets out to assess if knowledge of dressmaking skills has potential to encourage individuals to prioritise sustainable consumption.

## 3. Methodology

## 3.1 Study Design

The following research employs a multi-method approach. Methodological Triangulation (originally also referred to as 'mixed methodology') to obtain both quantitative and qualitative data through questionnaires and observation<sup>[27][28]</sup>. The design of the empirical dressmaking workshop based on the application of simple geometric pattern shapes combined Participatory Design methods to actively encourage an inclusive co-design environment, with Nudge Theory<sup>[26]</sup> being the driver for a change in the participants' thinking. The collaborative approach<sup>[29]</sup> allowed the collection of a new set of data on the potential value of inclusive design and positive enforcement through ethnographic observation. The objective of this research is to explore education, and the development of traditional sewing skills, as a means to offer school age consumers alternative options to engage with the challenges of fast fashion consumerism. The practice element of the methodology was delivered through a collaborative fashion skill workshop that took place over the course of two days.

The data collected, provides a platform to address the question of whether awareness of how to make one's own garments, can positively impact change in the way garments are used and cared for. Furthermore, the data assesses the ability of the participatory process to elongate the life of the clothing, reducing the necessity to buy more. An assessment of the dressmaking methodology presented by Martin<sup>[3]</sup> further aims to influence the field of creative education and move fashion towards a more sustainable future.

Questionnaires were strategically placed throughout the workshop experience, pre, post and six weeks following the workshop, allowing for a holistic evaluation of the results. The three questionnaires were designed to create a data set based on both qualitative and quantitative measure, by combining closed and open-ended questions to provide opportunity for a greater insight into participants' experience. Each set of questions was presented to participants at different stages of the workshop to evaluate their experiences in a managed way. Different types of closed questions were used including, dichotomy (yes/no), multiple choice, quantity and frequency of occurrence. Ranking questions were used to establish participants' attitudes towards the experience of the workshop and the likelihood of behavioural change. These included Likert scales, numeric scales, and behavioural scales<sup>[29]</sup>. The workshop and its strategic evaluation aim to disseminate knowledge of fashion practice.

## **3.2 Participants**

The workshop, 'DRESS CODE: DIY' was located in the Art Department of UK based Secondary School for Girls, and comprised of 14 female participants between the ages of 13 and 15 (school years 9 and 10). In order to generate the desired immersive environment for the workshop an application process was used to select participants. Application letters where potential candidates expressing a high level of enthusiasm and evidence of some aptitude for active engagement in fashion practice were selected to take part.

#### **3.3 Instruments**

The participants employed a simple garment making process originated by Martin<sup>[3]</sup>, making the evaluation suitably design process focused. Each participant was provided with the same set of instructions and necessary tools (a part-circle paper template, fabric, scissors, sewing machine, needles, tape measure and paper). All participants then used part circle-shaped pieces of fabric to construct their individual 'Segment Dresses'. To encourage individual engagement with creative choices, fabric colour selections were offered prior to the workshop. The 'shape'

method encourages basic understanding, through active participation. This simultaneously develops the practice skills required to make the garment.

> I am excited to say that You are cordially invited to attend the : DRESS CODE : DIY W oukshop

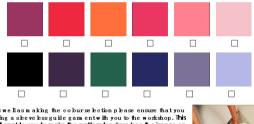


This personalised dress will be made to measure so

Where it in the summer, or where it in the winter, this dress is seasonless and can be adapted to wear all

Your sleeveless segment dress can be ideal for the spring summer months. However, paired with a long-sleeved top or polo neck and tights, your segment dress is equally as suitable for autumn winter.

Please write your name below, and number the boxes beneath with your firt and second choice of labric colours from the selection. I will do my best to get your preferred colour, however this cannot be absolutely guaranteed.



a she ve has guile gam entwith you to the workshop. This enable you to make the pattern for dress (see the image on the right).

Thope you are all looking forward to workshop, I certainly am! I can't wait to work with you and I will see you on Thursday! Love from, Madale x

Figure 1: Colour Selection and Guide Garment Example

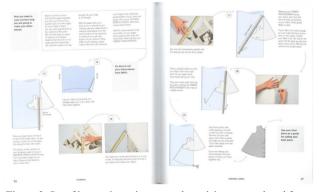


Figure 2: Set of instructions given to each participant reproduced from Martin 2016

## The Workshop Domain

The researcher divided the participants into two groups of seven based on their initial progress in the task. For example, those who had created their patterns, and drawn them out onto the fabric, with the correct measurements, remained in Group One. Group Two spent the day working on their machine skills (setting up, seams, and zig zag

finishes). On the second day Group One swapped with Group Two and in the afternoon, individuals continued working independently. Anecdotal observations and informal discussions were recorded throughout. This provided qualitative data, which served as a means to assess levels of engagement and the general behaviour of participants in the workshop environment.

The first written questionnaire was completed after an introductory presentation given by the researcher. The objective of the presentation was to give an overview of the problems facing the fashion industry. This included infographics on the negative impact of the current fashion industry and an overview of the researcher's industry experience. Current solutions, including upcycling and recycling were explained, along with the instructions for making the garment. Giving participants an overview of the expectations of the participatory workshop was essential to aid engagement from the outset.

The questions required respondents to provide information about their knowledge of fashion, their consumption habits, and their sewing skills. It was important to measure participants' interest in fashion prior to taking part in the workshop to provide a valid platform for comparing the data gathered at the conclusion of the workshop. At the end of the second day, participants completed questionnaire two, designed to evaluate engagement levels and collect participants' views on the workshop. The questions also aimed to explore whether participant involvement in the making of the garment would likely increase the participants' typical use of such a garment.



Figure 3: Collection of photographs showing the workshop in progress

The final questionnaire was delivered six weeks after the workshop, enquiring if the experience had positively impacted the relationship between participants and their 'Segment Dresses'. The impact of the workshop experience on buying behaviour was also measured in terms of whether participants had favoured new sewing projects over purchasing new garments.

#### 4. Results and Analysis

#### 4.1 Observations

In addition to the three questionnaires, further data was collected through informal discussions and behavioral observations over the two-day workshop. It is interesting to consider at the outset of this discussion an element of contradiction that reflects the broader paradox. Despite their relatively young age, each of the participants expressed strong ethical credentials in their application letter, one defining herself as being an Eco-Prefect: "I am an Eco Prefect so am passionate about saving our environment and controlling the amount of waste that is produced". Consistently the selected group identified a strong interest in fashion design and the fashion industry, however they also evidenced knowledge of pertinent environmental concerns and issues surrounding waste: "As much as I love clothes, I feel that I do share the concern for the amount of fabric and materials that are wasted during the production of clothing". Another participant expressed concern writing that "waste is the last thing we want to hear when it comes to fashion as it is such a major part of our everyday lives, and because of that we need to find a way to use it sustainably". What is particularly interesting to this study is the participants' desire to improve on, or develop, the skills necessary to make their own clothes: "I would love the chance to work on my sewing skills as I do not get the chance outside of school". Further comments included: "I have been sewing since a very young age, but I know I could still learn a lot to make my work better" and, "I haven't ever had the chance to try sewing or working with fabrics, yet it is something that I would love to learn". Another participant wrote: "My ambition is to go to art school, I love to make new clothes out of my old favourites. I love a challenge because I think it is great to learn new things".

## 4.2 Questionnaire One

The initial questionnaire pre-workshop helps illustrate the nature of the broader challenge. When asked what they spent their money on, the majority selected clothes/ fashion over other commodities and activities. These included, accessories, the cinema, eating out, books, iTunes and Apps. Although there was a general claim that garments were worn at least 10 or more times, and kept for a year and longer, the majority still claimed to purchase new clothing at least once a month. Despite any commitment to be an 'Eco-Prefect', the desire to be 'fashionable', and the drive to engage with the anticipated trends, proliferated via social media (36% of participants claimed social media had the strongest influence when buying a new outfit), is arguably a stronger lure, than any counter concern for the environment<sup>[30]</sup>.

On average, how often do you buy new clothes?



Figure 4: Pie Chart of participant responses to question 4 on the Pre-Workshop Questionnaire

As highlighted, the participants all identified a prior interest in dressmaking, and were keen to begin the workshop. However, it was apparent that they wanted to achieve the end result straight away. This became obvious through a reluctance to fully read and understand the instructions. Rather than rely on problem solving skills, participants requested to be directly told or shown what to do. This desire to be immediately satisfied was reminiscent of literature exploring factors that have contributed to individuals expecting such immediate solutions<sup>[31]</sup>. However, once participants began to take ownership, the distractions disappeared, as seeing their work evolve encouraged them to continue, indicating positive reinforcement. One individual who had made significant progress by the end of the workshop exclaimed: 'I just want to stay all night and finish it". Informal questions and empirical observations during the class further enforced the importance of fashion to the individual and the connotation relating to perceived social identity. At the same time, awareness of sustainability issues and the underlying concerns were commonplace amongst the participants. Their knowledge of these issues was mostly conveyed through education and exposure to conventional media.



Figure 5: Participants one word summaries of the workshop (responses to question one on the Post-Workshop Questionnaire)

#### 4.3 Questionnaire Two

Ouestionnaire Two gathered information regarding the dressmaking experience of each participant. Overall the responses suggested that there was a general feeling of pride in what had been achieved, with 93% responding ves to the question of whether they were proud of what they had achieved. Participants selected their two most enjoyable things about the workshop from a list of six. The options were based on the structure and aim of the experience. The two most selected were gaining new sewing skills and being involved in a different creative activity. The four remaining options included, working with your peers, having two days out of timetable, making something for yourself, and building on previous experience. Out of all 14 participants, all except one felt excited by the option to make, alter and personalise garments after the workshop, and over half said they would consider making their next garment before purchasing it. A negative aspect of the workshop was expressed in relation to the expectation for more help and more time to complete the work. This may suggest a lack of independence, but perhaps measured against the desire to improve the quality of the resultant garments.

#### 4.4 Questionnaire Three

In summary the final questionnaire distributed and collected six weeks post-workshop revealed that for the majority, an emotional attachment remained for their dresses. Of the participants, 21% had worn their dresses since taking part in the workshop and 64% of participants felt the experience of the workshop created an attachment to their dress. One participant wrote the reason being: "so much work went into it and it was the first time I made a garment with a sewing machine". Perhaps more interestingly, just over half of the participants had kept up their sewing skills and indeed gone on to independently start new sewing projects. For example, one individual wrote: "I am making a short / top combo to take to Greece", another explained: "I made a dress for my party". Further examples included, trousers, and a scarf. The remaining participants returned to their default purchasing habits, citing limited time and/or lack of confidence in their sewing skills. The majority of participants were unsure if the workshop experience had created fond memories in relation to their garment, and they were 50/50 on the workshop experience creating an emotional attachment to the dress. Overall, with 9 of the 14 participants agreeing it is unlikely they will discard the dress; involvement in the making process decreased the likelihood of discarding the garment.



Figure 6: Photograph of participants wearing their 'Segment Dresses' during the workshop

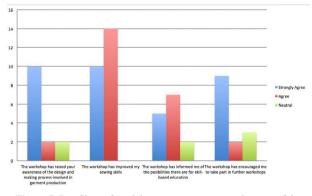


Figure 7: Bar Chart of participant responses to question two of the Post-Workshop Questionnaire

#### 5. Discussion

The broader aim of the workshop was to offer young women an opportunity to develop a designer/maker skillset. A further aim was to moderate their fashion consumption, and ideally generate a greater emotional attachment to otherwise disposable garments. It is recognised that statistically the results are not significant, however, arguably they offer value in the potential to instigate change by empowering people to behave differently. To return to the analogy of attitudes to food and health discussed in the literature review; where people can identify a direct personal benefit clearly, they can be motivated to invest in change. The participants consistently recognised the negative impacts of fashion consumption on the environment, and equally how current shopping habits are questionable in terms of waste, verses sustainable impact. The underlying issues are widely taught and integrated into the standard curriculum, at the same time a current topic widely debated on standard media. Despite knowledge and understanding of the interrelated problems gained through education, without an alternative, they can be seen to simply respond in the same way as their older contemporaries.

The ideals surrounding slow fashion are deemed as fanciful without commitment from the mainstream fash-

ion industry<sup>[1]</sup>. Arguably, consumers and their collective response are a key influence here. If there was a viable option, a participatory design methodology that better engaged consumers, and offered a level of personalisation through sewing skills, for example, there could be numerous mutual benefits. A key ingredient is the proliferation of sewing skills through mainstream education. However, there is the need for a creative response from the Retail sector to imagine new consumer experiences exploring co-design. Here digital technologies have potential to support mass-customisation from many platforms. Advancements in digital fabric printing, weaving, knitting and importantly pattern-cutting technologies, offer the means to evolve the desirable circular economies often discussed as an antidote to the global supply chain and the associated environmental issues. Engaging consumers in design and making, logically offers prospective empowerment with the means to be proactively involved in a solution.

A difficult to measure problem characteristic is the possibility of increasing the lifecycle of garments. Although the research presented offers no tangible evidence that the dresses will endure, Fletcher<sup>[5]</sup> identifies quality, individuality, and longevity as important values missing from the purchase decisions amongst current consumers. The pride and sense of achievement the participants collectively expressed at the close of the workshop are arguably triggers for an extended garment lifespan. In addition, it is not unreasonable to suggest that skills gained by the individual are equally triggers for the recognition of both making and design qualities in the garments they might buy. A greater first-hand appreciation of making skills could also underpin a greater sense of purchasing satisfaction, potentially countering the negative feelings and short-lived value identified by Van Bowen<sup>[15]</sup> and Chapman<sup>[6]</sup>. It is also reasonable to surmise that more discernible fashion choices, underpinned by new knowledge can perhaps support a changing in attitude, and help to counter the lack of responsibility consumers feel regarding the consequences of fast fashion as reported by the Business of Fashion<sup>[16]</sup>.

## 6. Conclusion

This study was designed to determine the effect of teaching dressmaking skills as a means to instigate change in the buying habits of young women. Holistically, the findings suggest that the participatory design experience has the potential to nurture stronger relationships between young people and their clothing. Furthermore, the new knowledge and skills of dressmaking, gained through education, show a broader potential to encourage more considered fashion purchases. It is recognised that the aim to change consumer fashion buying habits is a complex problem, and attempts to recondition established patterns of consumption are making little headway. The tangible outcome for this study is that new behaviour can be fostered through an education experience helping to empower up and coming generations of consumers. An earlier and more widespread introduction of clothing design and making education is shown to have clear potential to contribute as a springboard towards a 'leaner economy'<sup>[32]</sup>.

# REFERENCES

- [1] Sumner, M. 2017. It may not be possible to slow down fast fashion – so can the industry ever be sustainable? [Online]. [Accessed October 25, 2017]. Available from: http://www.independent.co.uk/lifestyle/fashion/it-may-not- be-possible-to-slow-downfast-fashion-so-can-the-industry-ever-be- sustainable-a797003.html
- [2] AL Hirscher, K Niinimäki (2013) Fashion activism through participatory design Proceedings of the Crafting the Future
- [3] Martin, R. 2016. No Patterns Needed DIY Couture from Simple Shapes. London UK: Laurence King Publishing Ltd
- [4] Feldman, E. 1992. Fashions of a decade: the 1990s. London: B.T. Batsford.
- [5] Fletcher, K. 2014. Sustainable Fashion and Textiles Design Journeys (second ed.). Oxford: Routledge.
- [6] Chapman, J. 2009. Design for (Emotional) Durability. Massachusetts Institute of Technology: Design Issues. 25(4), pp. 29-35
- [7] Honoré, C. 2005. In Praise of Slow How a Worldwise Movement is Challenging the Cult of Speed. London UK: Orion Books Ltd.
- [8] Minney, S. 2016. Slow Fashion aesthetics meets ethics. Oxford UK: New Internationalists Publications Ltd.
- [9] Statistica. 2018. Market Value of Health and Wellness in the United Kingdom (UK) from 2012 to 2017 (in million euro0. [Online]. [Accessed February 27, 2018].
- [10] Korn, L, Gonen, E, Shaked, Y, Golan, M. 2013. Health Perceptions, Self and Body Image, Physical Activity and Nutrition among Undergraduate Students in Israel. PloS ONE. [Online] 8(3) [January 15 2018]. Available from: https://doi.org/10.1371/journal.pone.0058543
- [11] Office for National Statistics. 2017. Adult smoking habits in the UK: 2016 Cigarette smoking among adults including the proportion of people who smoke, their demographic breakdowns, changes over time, and e-cigarettes. [Online]. [Accessed December 2018]. Available from: https://bmcpublichealth. biomedcentral.com/articles/10.1186/s12889-018-5995-3.

- [12] Ng Fat, L, Shelton, N and Cable, N. 2018. Investigating the growing trend of non-drinking among young people; analysis of repeated cross-sectional surveys in England 2005-2015. London, UK. BMC Public Health. [Online]. [Accessed October 2018]. Available from: https://bmcpublichealth.biomedcentral.com/ articles/10.1186/s12889-018-5995-3
- [13] Max-Neef, M. 1992 Development and Human Needs in: Elkins, P. ed(s). Real Life Economics: Understanding Wealth Creation. London UK: Routledge pp.197-214
- [14] Thorpe, A. 2007. The Designer's Atlas to Sustainability. Washington: Island Press, p.118.
- [15] Van Bowen, L. 2005. Experientialism, Materialism and the Pursuit of Happiness. Review of General Psychology. [Online] 9(2) pp.132-142 [January 14 2018]. Available from: http://psych.colorado. edu/~vanboven\_rgp\_2005.pdf
- [16] Business of Fashion. 2017. Fashion Needs an Open-Source Sustainability Solution. [Online]. [Accessed October 13, 2017]. Available from: https://www. businessoffashion.com/articles/this-week-in-fashion/ fashion- needs-an-ope n-source-sustainability-solution
- [17] Gladwell, M. 2008. Outliers: The story of Success. United States: Little, Brown and Company.
- [18] Fletcher, K. 2010. Slow Fashion: An Invitation for Systems Change. Fashion

Practice. 2(2), pp, 259-266

- [19] Sung, K, Cooper, T and Kettley, S. 2015. An exploratory study on the links between individual upcycling, product attachment and product longevity. In: Cooper, T, Braithwaite, N, Moreno, M and Salvia, G (Joint Editors). PLATE Conference. 17-19 June. Nottingham, UK. Nottingham: Nottingham Trent University: CADBE, pp.349-356
- [20] Schifferstein, H.N.J and Zwartkruis-Pelgrim, E.P.H. 2008. Consumer- product attachment: Measurement and design implications. International Journal of Design. 2(3) pp.1-13

- [21] Oxborrow, L. 2015. Extending the Life of Clothes. Textiles. 42(3), pp.6-9 Fashion Revolution. 2017. What's Your Clothing Love Story? Loved Clothes Last. 1(2), pp.51-61
- [22] Dickson, M, Cataldi, C and Grover, C. 2016. The Slow Fashion Movement. [Online]. [Accessed August 10, 2017] Available from: https://www.notjustalabel.com/editorial/slow-fashion-movement
- [23] Illich, I. 1971. Deschooling Society. London: Calder and Boyers Ltd Martin, R. 2016.
- [24] Friedman, K. 2016. Forward. In: Muratovski, G, Research for Designers a Guide to Methods and Practice (p.xxi). London: SAGE Publications Ltd.
- [25] Hoskins, T. E. 2014. Stitched Up The Anti-Captialist Book of Fashion. London UK: Pluto Press.
- [26] Thaler, R.H and Sunstein, C.R. 2009. Nudge: Improving Decisions About Health, Wealth, and Happniess. London, UK: Penguin Publishing Group.
- [27] Yin, R.K. 1994. Case Study Research: Design and Methods. Thousand Oaks, CA: SAGE
- [28] Bryman, A. 2006. Integrating Quatitative and Qualitative Research: How Is It Done? Qualitative Research. 6(1), pp.97-113
- [29] Muratovski, G. 2016 Research For Designers A Guide to Methods and Practice. London UK: SAGE Publications Ltd
- [30] Marsh, S. 2017. Girls suffer under pressure of online 'perfection', poll finds. [Online]. [Accessed October 27, 2017]. Available from: https://www.theguardian. com/society/2017/aug/23/girls-suffer-under- pressure-of-online-perfection-poll-finds
- [31] Bobrow, E. 2014. In search of lost time. Why is everyone so busy? The Economist. [Online]. (Christmas Double Issue) [Accessed January 24, 2018]. Available from: https://www.economist.com/news/christmas- specials/21636612-time-poverty-problem-partly-perception-and-partly- distribution-why
- [32] Flemming, D. 2016. Lean Logic: A Dictionary for the Future and How to Survive It. Vermont: Chelsea Green Publishing.