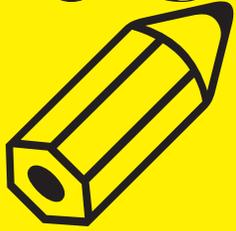


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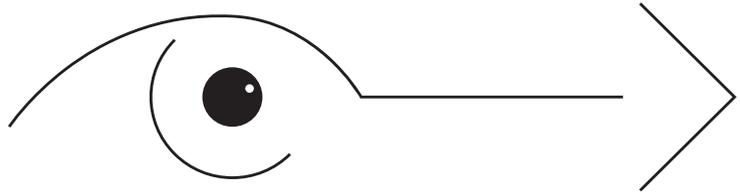
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Visible Language

the journal of visual communication research

Student Special Issue

december 2018



Before there was reading there was seeing. *Visible Language* has been concerned with ideas that help define the unique role and properties of visual communication. A basic premise of the journal has been that created visual form is an autonomous system of expression that must be defined and explored on its own terms. Today more than ever people navigate the world and probe life's meaning through visual language. This journal is devoted to enhancing people's experience through the advancement of research and practice of visual communication.

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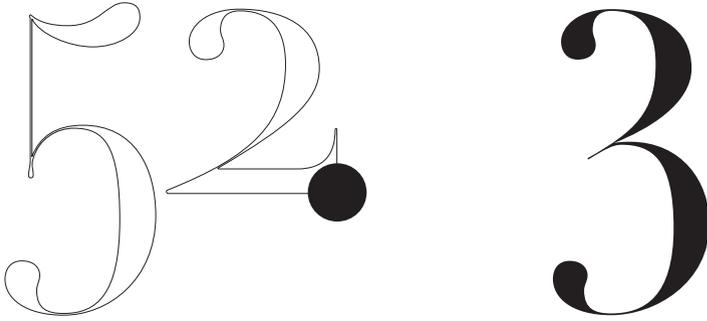
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Visible Language
Student Special Issue



the journal of
visual communication
research

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Maria dos Santos Lonsdale

December 2018

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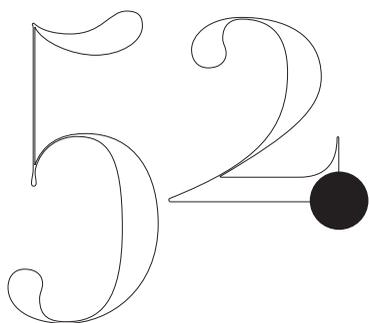
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Editor's note:

All the articles for the Student Special Issue went through our standard double-blind peer-review process. The only concession to our normal research publication standards was occasional allowance for fewer research participants than might otherwise be necessary.

We hope to repeat this student special issue at various times in the future as a way to support our mission of advancing communication design research and scholarship.

mz



Student Special Issue

Visible Language is happy to present a Student Special Issue that includes articles on student research into Typographic and Graphic design involving user-centered research methods. The importance of focusing on user-centered approaches emerges from a need identified through years of experience as a lecturer, researcher and design practitioner. Design solutions that are driven merely by opinion and intuition, without having involved the target user throughout the different stages of the design process, nor having been tested and developed through several stages of iteration and re-design, might be prone to failure. Design that is developed for the user and with the user stands a greater chance of high and long-term impact.

The objective of the Student Special Issue was to support early career scholars by giving them an opportunity to experience the publication process, and to encourage supervisors/tutors to be involved in the publication process with joint authorship where appropriate.

In this Student Special Issue we have included a wide range of research themes that show the potential of the field of Typographic and Graphic Design to produce novel user-centered design and research solutions that are directly applicable to real life contexts. These include research on: the interrelation between handwriting and personal branding; children's engagement with health and safety posters; the effectiveness of two-dimensional versus three-dimensional museum guide maps; the appropriateness of different styles of illustration for visual resources used in combination with assistive technologies for people with aphasia; the effects of reading from paper versus an eink display on recall and reading speed; the potential of garment label design and companion information to communicate fashion sustainability issues to young consumers; the application of digital drawing within remote Indigenous contexts; the documenting of live art by locating and empowering the document user.

The publication of this Student Special Issue would not have been possible without the support of Mary Dyson (Department of Typography & Graphic Communication at the University of Reading, UK), the hard work of a strong body of reviewers from various parts of the world, and the patience and skill of Mike Zender, editor of *Visible Language*, in making sure the layout and images were a good representation of the research and design outputs.

Maria dos Santos Lonsdale, *Guest Editor*

Garment label design and companion information to communicate fashion sustainability issues to young consumers

Ana Perez

Maria dos Santos Lonsdale

With the rise of fashion consumption and a clear lack of promotional input by retailers on the issues of sustainable fashion, this research shows that there is little awareness particularly among young adults on the issues of fashion sustainability. Therefore, a clear need to inform consumers on how to utilize, care for and dispose of fashion items is necessary to make the important changes to the planet's fashion waste issues. To this end, this research explores ways of how fashion brands can communicate a more sustainable way of consuming fashion to young consumers in the UK. Focus groups were conducted with the objective of identifying the main issues relating to fashion consumption including the lack of awareness and disposal of garments. These were followed by a collaborative workshop involving young consumers, where a fashion brand was created to educate consumers through information and garment label design solutions using innovative communication strategies. To ascertain the validity of these design solutions, usability testing was then conducted, which identified further design improvements. Although conducted with a small set of participants, this collaborative and user-centered research is well positioned to propose innovative solutions to communicate research-based design solutions on how to communicate, educate and change the perception of sustainable fashion among young consumers in the UK.

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Keywords

Information Design
Garment Label Design
Packaging Design
Fashion sustainability

1. Background

The fashion industry is one of the largest industries contributing to the world economy. However, it is also one of the most polluting industries. (Gardetti and Torres, 2013). Brands are producing more fashion and at a faster pace, and consumers are purchasing more clothes. Consequently, each year the environmental impact of the fast-fashion business results in more and more waste.

Morgan and Birtwistle (2009) argue that this is particularly an issue with young consumers. Their research showed that one in five young female consumers admits to purchasing a new item of clothing every week. This is significant to retailers who exploit these purchasing habits, and high street brands respond to these fashion trends with high speed and high-volume manufacturing processes. It further undervalues the impact on sustainability, giving emphasis to low cost and high-speed production and ultimately producing inferior quality items (Fletcher, 2008).

The UK fashion industry, in particular, is worth an estimated £27 billion for women's wear alone and is expected to grow 23% by 2020 (Mintel, 2016). The fashion industry therefore makes a great contribution to the British economy. However, it is also the second most polluting industry on the planet after oil (Ethical Fashion Forum, 2014).

Researchers claim that some consumers are starting to show an interest in ethical issues and the impact of the textile industry (Carrigan and Attalla, 2001), particularly after the fire of 2013 in which 1,133 fatalities occurred and many more were wounded in the garment factory Rana Plaza in Dhaka, which produced garments for major high-street fashion brands (Jacobs and Singhal, 2017).

However, although current research shows that consumers might be increasingly aware of, and interested in, sustainable fashion, there is a discrepancy between attitude and actual behavior (Bray et al, 2011). Shaw and Riach (2011) agree that consumers might have good intentions towards sustainable items, but this does not translate into purchasing actions. This is further supported by MISTRA's research (2013) through a survey on purchasing behavior, maintenance and disposal of garments with 1175 participants aged between 16 and 30 years. The outcomes of the survey showed that consumers have environmental concerns, but these concerns do not always convert to an actual purchase of a sustainable item (MISTRA, 2013).

It is argued that the lack of consumer awareness when purchasing garments and the confusing connotations surrounding sustainable fashion needs to be addressed by retailers to have a long-lasting effect. (Moore and Wentz, 2004; Beard, 2008; Thomas, 2008; Gwilt and Rissanen, 2011).

One possible solution given by researchers is the communication of ethical information to consumers through clear garment labels (Saicheua et al., 2012; Joy et al., 2012; Thomas, 2008; Aakko and Koskenurmi-Sivonen, 2013). If sustainable fashion is to reach the mainstream fashion-conscious consumer, a label with consistent and clear information could explain the garment's sustainable attributes, which otherwise might be unknown to the consumer (Sherburne, 2009; Thomas, 2008). Therefore, the ability to access and understand the information on care labels could prevent the early deterioration of clothing caused by the overuse of washing powders, and the incorrect selection of washing temperatures that ultimately affects the environment (McLaren, et al. 2015).

However, research on the design of garment labels from a design perspective is scarce (or even non-existent, as far as the authors are aware). The research available on labels for fashion items seems to focus solely on the content of the labels, such as the material and the source of the product but not on their design (DEFRA, 2008; HIS, 2015; Niinimäki, 2015; Post, 2017).

In conclusion, despite fashion sustainability issues being showcased in the media, there is still a lack of understanding amongst consumers and a need for accessible information. Furthermore, it appears that there is a strong need for educating people from an early age, as this could influence their future buying behavior.

The research proposed here will therefore increase our understanding of the factors behind young consumers' awareness relating to sustainable fashion and contribute to knowledge in the field of information design by focusing on an unexplored area of garment labels, offering new research-based design solutions capable of informing, educating and influencing young consumers.

Therefore, the aim of this research is to establish a relationship between young consumers and fashion sustainability, in today's society, by providing accessible and clear information. Specific objectives are: 1) To categorize young consumers' understanding of sustainable fashion and ethical issues within the textile industry; 2) To identify young consumers' purchasing behaviors and act on these with relevant design and communication solutions; 3) To explore innovative design approaches to garment labels, taking into account information design principles and user needs and expectations.

2. Methodology

2.1. Literature review

The first stage of the literature review provided a vital source of information to support and broaden a wider spectrum of the research topic, highlighting current sustainability issues within the fashion industry that are vital to evaluate, compare, and proving a critical viewpoint to broaden the research topic. To focus the research further and analyze the differences between the connotations of sustainable fashion, the three primary areas researched were: Eco Fashion - garments produced in a less harmful way to the environment; Slow Fashion – garments produced locally that create a smaller carbon footprint and are meant to last; Organic – clothes that have been created with fewer chemicals and have limited impact on the environment. Ethical issues surrounding the fashion industry were also analyzed, and the five main areas researched were: child labor, low wages, health and safety, the environment, and animal cruelty.

A second stage of research looked at the role information design can have in building consumers' awareness by communicating effectively about sustainability. Areas looked at included: purpose, effectiveness, structure, legibility, text, color, relationship between text and image, unity and consistency, content, aesthetics, attention and recall.

To determine the design ideation of the project the secondary research in this study involved the creation of a research structure based on the action research cycle used by the social scientist Kurt Lewin (Kemmis and McTaggart, 1981) and theories of applied behavioral science and action research (Figure 1). The conceptual framework based on the action research theory used by Lewin established the mixed research method for this process involving: observation, focus group, collaborative workshop, interview and usability testing with the ability to link the findings back to the theory and practice (Townsend, 2013).

Once the research questions were defined, a detailed research structure was also created to develop and consolidate the design process (Figure 2). This newly developed research structure enabled the researchers to be directly involved in every stage of the research and design phases by working collaboratively with the participants. The objective of this being to: a) gain a deeper understanding of the problem by studying young consumers' purchasing habits; b) observe and reflect on the outcomes and explore innovative design approaches; and

FIGURE 1

Example of action research spiral by Kemmis and McTaggart (1981)

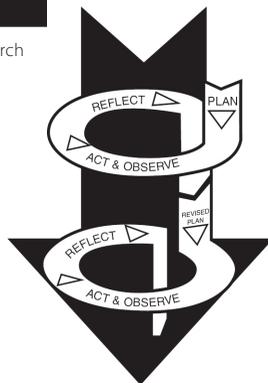
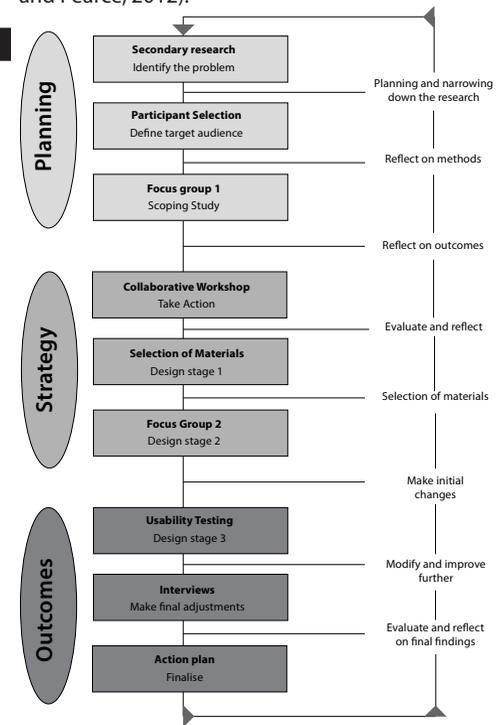


FIGURE 2

Research structure based on the action research cycle

c) discover new directions in a planned and systematic manner and develop design solutions to comply with the user needs (McNiff et al, 2003; Crouch and Pearce, 2012).



In order to obtain a true picture of young consumers' awareness of sustainability and the use and care of sustainable fashion, a total of 36 participants (22 females and 14 males) between 16 and 19 years of age were carefully recruited for a subsequent series of interviews, participate in the material selection, design and product development carried out in this project, as described next.

2.2. Focus groups 1A and 1B –

Preliminary participant selection

To establish an understanding of the target audience necessary for the design intervention a preliminary research with two focus groups (FG) of different ages (FG1A = 16-19 and FG1B = 25-60) was carried out. In action research, this stage is necessary in order to adapt and refine the initial research enquiry and enables access to a deeper understanding of participant views and backgrounds (Crouch and Pearce, 2012; Dawson, 2013).

The two groups were as follows:

Focus Group 1A: 25 to 65-year old, eight participants, five females and three males.

Focus Group 1B: 16 to 19-year old, eight participants, six females and two males.

The two groups were seen separately to gain original views and diverse responses (Crouch and Pearce, 2012). A discussion was conducted with each group. The participants in FG1A all had an income and owned their own properties. Participants from FG1B were all students living with parents or a guardian and had a part-time job to support their expenses and travel costs and lacked knowledge as far as sustainability issues were concerned. Ethical guidelines were followed, and the participants age was considered at all times.

The responses of the focus groups were noted and helped to establish the difference in attitudes and understanding towards sustainable fashion, specifically the relationship that young consumers have with the awareness, acquisition, use, care and disposal of fashion. However, the older group (FG1A) was eliminated from the study in the early stages of the research due to their low consumption habits and well-established background knowledge of sustainable fashion compared to the younger group.

2.3. Focus group 2 –

Views on environmental and sustainability issues

Once the target audience was selected, a new focus group (FG2) with eight participants (six females and two males) was set up to understand in more detail the views of young consumers aged 16 to 18 years old on environmental and sustainability issues. This focus group was more observational in nature and offered a non-influential insight into how the target audience behaves (Crouch and Pearce, 2013). The responses of FG2 were noted, and this was an important step to establish the target audience's attitudes and understanding towards sustainable fashion in more depth, and in particular, the relationship young consumers have with the acquisition, use, care and disposal of fashion.

2.4. Collaborative workshop

A collaborative workshop was conducted where researcher and participants worked together to identify experience, actions, values and views, as well as possible design solutions and directions.

The aim of the workshop was to understand how to better inform and possibly change the attitudes of consumers and find ways of promoting and sharing fashion sustainability issues. The objective was to define and generate design ideas for a product and possible promotional tools to communicate and engage young consumers on the impacts the fashion industry has on the environment. In action research, this is also seen as a goal for improving design and initiating change (Crouch and Pearce, 2013).

The workshop structure followed a step-by-step process with distinct phases and reflective practices based on the behavioral sciences and collaborative workshop method used by the Design Council (2013 and 2015) also known as participatory action research (Crouch and Pearce, 2013).

The techniques involved a series of discussions, mind-mapping and design ideation to capture the gap in knowledge of young consumers and explore design issues currently found in the fashion industry and generate design ideas to justify design decisions. To avoid repetition of tables, further details are available in the results section 3.4.

The selected group for the workshop consisted of eight male and eight female art college students aged between 17 and 19 years. The nominated group was selected because of their complementary skills and shared working approaches, which are important when conducting action research (Greenwood and Levin, 2007).

2.5. Focus group 3 –

Design development and outcomes

A follow-up focus group (FG3) with a semi-structured approach was conducted, which was more discursive and interactive in nature than the first focus group. This allowed for the extraction of further details of the design processes initiated in the collaborative workshop and for gathering further information on the current design and sampling stages (Dawson, 2013).

Six participants (four female and two male) aged 17 to 18 years were chosen from the previously run workshop which allowed for an easy flow of conversation enabling the researcher to establish initial design features and materials which shaped the direction of the design outcomes.

Following this focus group a review period was used to reflect on the progress of the project and which resources to be utilized, and to select the materials to be used for the design development (Crouch and Pearce, 2013).

2.6. Usability testing

The usability testing was carried out with 3 females and 2 male participants from the previous collaborative workshop to participate in the design proposal for the garment labels. Usability testing is a popular technique for designers to explore, observe and acquire a better understanding of how users interact with designs, and consequently informs researchers of the design amendments needed (Nielsen, 2012; Visoky O'Grady and Visoky O'Grady, 2017).

According to Nielsen (2012), testing 5 users is typically enough to be able to identify the most important usability problems in a design. Usability testing is best carried out during the design development stage to allow researchers to be truly aware of participants' needs and to make important changes to the design output as appropriate. With this in mind, in this study usability testing has been applied during the design development in order to assure valid and reliable design solutions.

2.7. Interviews

The last phase of the research process was to ascertain the validity and success of the design outcomes. Semi-structured interviews were conducted with four participants aged 17 and 18 years old to finalize the design development stage (2 female and 2 male). The interview was of an open-ended nature to allow a conversational approach where the researcher asked questions more freely. The researcher was “as unobtrusive as possible” and took the role of an “active listener”, making sure not to influence the participants’ responses (Crouch and Pearce, 2013, pp113). This form of interviewing also made it possible to expand on further design opportunities for future development and investigation (Dawson, 2013).

3. Findings, outcomes and analysis

3.1. Literature review

Findings from the first stage of literature review showed that there is a lack of consumer knowledge amongst young consumers and a lack of transparency by fashion brands surrounding sustainable fashion, emphasizing the need for clearer garment labelling (Table 1). Consequently, to achieve changes amongst consumers, in addition to sharing fashion sustainability topics, progressive communication and promotional solutions through fashion branding, marketing and information design were also analyzed.

TABLE 1

Findings from the literature review on current sustainability issues

CURRENT SUSTAINABILITY ISSUES		
Literature Review	Analysis & Findings	Sources
Young consumers and the perception of sustainable fashion	<ul style="list-style-type: none"> Ethical fashion is not a priority A belief that ethical fashion is expensive and un-fashionable Lack of knowledge of the impacts of fashion on the environment from production, usage to disposal 	Ethical Fashion Forum (2014), Fletcher, (2008), McNeil and Moore (2015), Bear (2008), More and Went (2004), Thomas (2008), Gwilt and Risannen (2011), Morgan and Britwistle (2009) Scheider (2014), Mintel (2016)
Sustainability within the fashion industry	<ul style="list-style-type: none"> Little evidence that ethical issues would change consumer purchasing behaviour Some retailers have implemented transparency within their businesses 	McNeil and Moore (2015), Niinimäki, (2015), MISTRA, (2013), DEFRA, (2008),
Garment labelling	<ul style="list-style-type: none"> Garment labels unclear and inconsistent Campaign on ethical fashion is needed, to make consumers aware of the impacts of fashion on the environment 	Niinimäki (2010), Clevercare (2014), McLaren (2015), HIS (2015), Fletcher (2008), DEFRA (2008), Thomas (2008), Sherburn (2009)

TABLE 2

Findings from the literature review on information design principles

INFORMATION DESIGN PRINCIPLES (GARMENT LABELS)		
Design Principles	Analysis & Findings	Sources
Purpose	The main goal in information design is clarity of communication. The message should be accurately designed, produced and distributed for the audience in question, and then correctly understood by the audience	Lipton (2007), Petterson (2010)
Effectiveness	Communication is not complete until the intended users understand the message. Testing the designs with the audience is important	Petterson (2010), Lipton (2007)
Structure	A clear structure and hierarchy for the content should be developed, and the number of levels in the structure should be limited	Petterson (2010), Waller (2011), Lonsdale (2014)
Legibility	Text printed on paper or displayed on screens should be easy to read, and pictures, colour and layout should be clear and accessible	Lipton (2007), Petterson (2010), Waller (2011), Lonsdale (2014)
Text	The following should be avoided: too small type, too short and too long text line lengths, poor contrast between the text and its background; too many font types; too narrow interlinear spacing; etc.	Petterson (2010), Waller (2011), Lonsdale (2014), Tetlan and Marschalek (2016)
Color	Color can be used to enhance perception of the visual message, but not as decoration, and the number of colors used should be limited	Lipton (2007), Petterson (2010), Tetlan and Marschalek (2016)
Text and image	Text and illustrations/images should be presented in close connection, and labels and captions should be clear	Lipton (2007), Petterson (2010), Waller (2011), Tetlan and Marschalek (2016)
Unity and consistency	Similar elements (color, orientation, shape, size, texture, etc.) should be used to show that objects belong together, and the amount of space around elements should be consistent and reflect their relationships	Lipton (2007), Petterson (2010), Waller (2011), Tetlan and Marschalek (2016)
Content	Content should be useful and meaningful	Lipton (2007), Petterson (2010)
Aesthetics	An aesthetically pleasing message is more efficient and more effective and can create a good first impression	Petterson (2010), Waller (2011)
Attention	Information can hold the viewer's attention when: a) clear and distinct typography is used; b) the rhythm, layout, and pace are not predictable nor too boring; c) only a limited number of information elements are shown at the same time	Petterson (2010), Tetlan and Marschalek (2016)
Recall	Typographic cues (underlining, bold and color) can help readers understand and recall information, but must not be over-used	Waller (2011), Lonsdale (2014)

Findings from the second stage of the literature review relating to principles of information design have been compiled in Table 2 and are further referred to throughout the design development as described in the sections below.

3.2. Focus group 1A and 1B

This initial study established a clearer understanding of consumers' basic knowledge and their attitudes toward sustainability.

In FG1A (26 – 65-year old earning an income and with their own properties), all participants were aware of sustainable issues and had bought organic and Fairtrade food in the past. However, they felt that with the current economic climate they could not always afford to buy organic food. All participants purchased clothes from known high-street retailers and felt that they could trust these retailers with their manufacturing and ethical statements. However, only one participant in FG1A admitted to purchasing clothes at a low-cost retailer. All participants in FG1A were aware of recycling and how to dispose of clothes, most of them passing on their unwanted goods to family members or charity shops.

In FG1B (16 – 23-year-old students living with parents/guardian and with a part-time job to support their expenses and travel costs), the response to the question on sustainability differed from FG1A. When asked what sustainability meant to them, none of the participants could give a definite answer. With regard to their knowledge of organic or Fairtrade items, only one of the participants responded confidently.

Further discrepancies were found when comparing responses between FG1A and FG1B related to the disposal of items (Table 3). Five out of eight participants in FG1B admitted to throwing unwanted clothes in the bin. Their justification for this was that the clothes “were cheap and not worth much”. In contrast to this, participants showed real concern when buying Fairtrade and organic food. It appeared that all participants in FG1B had a clear understanding on this matter and commented that they would “never eat eggs unless they are clearly marked as being free range”. These findings show similar conclusions from previous research findings carried out by Shaw and Riach (2011), which revealed that consumers showing interest in Fairtrade and ethical issues will not necessarily make sustainable clothing purchasing choices.

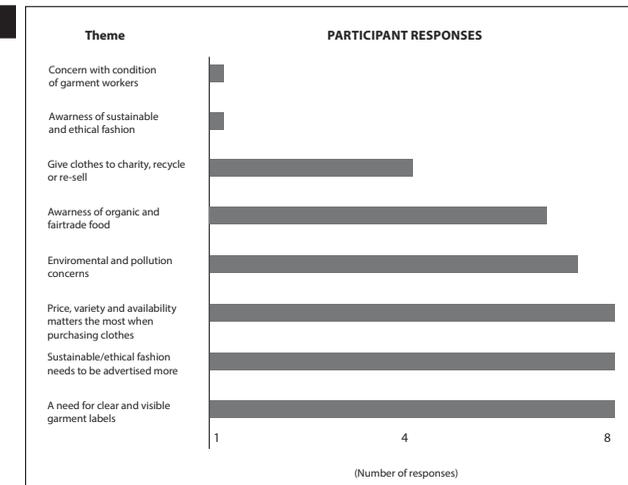
TABLE 3
Responses from the Preliminary Participant Selection sessions

PRELIMINARY PARTICIPANT SELECTION FINDINGS	
FG1-A (26 – 65-year old)	FG1-B (16 – 23-year old)
<ul style="list-style-type: none"> Concerned with ethical issues Aware of some ethical options Knowledge of washing instructions on garment labels Limited knowledge of where to buy ethical fashion Believes that ethical fashion is expensive Give unwanted clothing to charity or family members 	<ul style="list-style-type: none"> Not concerned with ethical issues Limited awareness of ethical issues Some have thrown unwanted clothes in the bin Limited understanding of washing instructions on garment labels Used to online services for shopping and don't watch television often Use social media to communicate and gather information Some awareness of recycling options and give old clothes to charity or family members

3.3. Focus group 2

Although six out of the eight participants showed awareness of organic food, the findings confirmed that there is an apparent lack of understanding of sustainable issues related to fashion, as none of the participants were concerned or aware of ethical issues within the fashion industry. The findings also showed areas in which the participants felt that fashion brands needed to improve their communication with consumers. Participants also felt that there was a lack of advertising and garment information within stores and social media in terms of material, care and disposal of clothing. This observational exercise had an impact on the research in terms of deciding which area to focus on for this research study. It transpired that young consumers aged 16 to 18 years, in particular, would benefit the most from information or educational outputs surrounding the environmental impacts of the fashion industry. See the responses in Figure 3.

FIGURE 3
Focus group 1 responses



3.4. Collaborative workshop

The first step was to establish the participants' background knowledge of sustainable fashion. The workshop ran for 1 hour and 30 minutes and, as already mentioned, the order was planned through a collaborative workshop method used by the Design Council (2013). The workshop order is shown in Table 4 where the steps of the workshop plan are listed, together with the corresponding action taken by participants and the workshop outcomes.

At the beginning of the workshop participants' basic knowledge about sustainable fashion was limited. Only after a discussion and viewing a short 2-minute documentary of “The True Cost” (2016), did participants finally have the basic knowledge to carry on with the workshop.

The findings of the collaborative workshop support previous research showing that although some consumers might have an awareness of what organic fashion means, the specifics of what sustainability, ethical, Fairtrade or eco mean remain confusing (DEFRA, 2008). The design ideation activity showed that young consumers like to engage with technology,

TABLE 4

Collaborative Workshop structure

COLLABORATIVE WORKSHOP		
Collaborative Workshop Plan	Action taken by participants	Workshop outcome
1. Establish the problem	Describe what sustainable/ethical fashion means	Limited knowledge
2. Understand the issues	Discussion on sustainable fashion	Lack of awareness
3. Watch documentary	Watch short film and discuss thoughts	Participants shocked and not aware of the issues
4. Discussion	Discuss new knowledge	Participants understanding and taking it on board
5. Mind map	What does sustainable fashion mean to you now	Participants show awareness and interest
6. Vote for an area to work on	Participants work in groups	Main themes: sustainability and child labour
7. Create a persona	Participants create a persona they are going to design for	All chose a young person as feel these are the people who need most information
8. Vote again	Present to the group	Participants sharing new knowledge
9. Refine	Discuss how to solve the problem	Participants evaluate and discuss their ideas
10. Create the idea	Use paper, pen, scissors	Create ideas on how to promote sustainable fashion with posters
11. Present	Present the big idea to the whole group	Young people need more information and they mostly communicate on phones
12. Improve	Ideas are improved	Social media campaigns and advertising as a medium of communication
13. Evaluate	Discussion and future plans	Ethical fashion needs to be discussed on platforms young people access
14. Discussion	More information is needed to inform consumers	Label on garments need to be clearer. QR codes need to work correctly and efficiently

share information on social media and that garment labels are not informative enough. This therefore reinforces the lack of knowledge among young consumers and the need to be informed and educated about these issues. This supports the decision, as previously noted, to focus the research on this age group and develop informative garment labels with technological outcomes to be shared on social media.

3.5. Focus group 3

FG3 was a follow-up from the collaborative workshop and offered an opportunity to share initial findings and develop more design ideas with the participants. Therefore, the first part of the focus group was a review of the collaborative workshop. This allowed for an examination of how much information shared in the previous workshop had been retained and reflected

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on by the participants. Results showed that all participants had retained information from the workshop and said they were now actively involved in some way or another with sustainable fashion. As a result of the collaborative workshop the participants were now able to:

- Understand what sustainable/ethical fashion means.
- Make educated decisions when purchasing fashion.
- Share their knowledge with friends and family members.
- Develop further interest in this area.

Although participants admitted that they would continue purchasing clothes from high-street retailers, they also mentioned that, due to the knowledge they had acquired from the workshop, they would be able to make better purchasing choices asking themselves if they really need the item rather than just buying it because they want it. These findings generated ideas to develop the design project and especially showed that education and information sharing is an essential part of changing consumers' perception on fashion consumption.

3.6. Usability testing

3.6.1. Design ideation and development

The design outputs were developed through extensively researching the fashion industry, in particular, high street retailers and their branding and communication approaches to promote ethical issues and the responses gathered from the primary research.

The design development was broken up into three stages. Firstly, the concept for the label and packaging was developed, followed by the design of a T-shirt and lastly the communication pathway which involved the creation of a QR code, a landing page acting as a website and a video.

This investigation into labels and packaging emphasized the colors and type choices that fashion brands select to create brand awareness. Eco brands such as Patagonia, Kowtow, People Tree and Eileen Fisher were also investigated to draw up a comparison with the high-street counterparts. As a result, the high-street retailers offering organic options had labels with green backgrounds and socio-emotional messages.

On the other hand, garment labels from eco brands were simple in design and some displayed humor to draw in the consumer. Therefore, color can be used to enhance perception of the visual message, but not as decoration, and the number of colors used should be limited (Lipton, 2007; Petterson, 2010; Tetlan and Marschalek, 2016).

The main goal of the design was to achieve clarity of communication making sure the text, illustration, images, message and label were accurately designed, produced and presented, and then correctly understood by the audience in question (Lipton, 2007; Petterson, 2010, Waller, 2011; Tetlan and Marschalek, 2016).

Further information design principles were followed, such

as creating a clear structure and hierarchy for the content and limiting the number of levels in the content structure (Pettersson, 2010, Waller, 2011; Lonsdale, 2014). To achieve a sense of communication with young consumers through a brand it was vital to link a fashionable product with targeted consumers. This was achieved by creating the “Do I Care?” brand and generating a three-way pathway of product to website to social media options. In addition to this, a packaging concept was introduced to the participants to gain feedback and share ideas. The last item shown was a video to be utilized as a communication tool with consumers through social media. The findings of these are shown below.

3.6.2. Garment Label

The participants were shown a selection of garment label samples where they commented on the size, color, overall look and feel of the label. The garment labels were developed from the responses generated from the interviews and collaborative workshop findings and following good principles of information and typographic design as defined by Lipton (2007), Pettersson (2010), Waller (2011), Lonsdale (2014), and Tetlan and Marschalek (2016). These include: structure, layout, legibility, text, color, relationship between text and image, unity and consistency, aesthetics,

A further label was shown which included a QR code. Participants were asked to comment on the readability, understanding and functionality of the QR code. They considered the inclusion of the QR code on the label important, but thought it was vital that it worked on their mobile phones, as many QR codes found in garments do not work especially well after washing.

In addition to this, a packaging concept was introduced to the participants to gain feedback and share ideas. The last item shown was a video to be utilized as a communication tool with consumers through social media. The findings of these are shown below.

The findings showed that overall the illustrations, fonts and simplicity of the labels were considered good, relevant and legible. However, the size of the garment label at this stage was too large and all participants said that they would cut it off once they had purchased the T-shirt. In conclusion, although the design of the label responded to good principles of design and communicated the message, it did not have a practical outcome (Pettersson, 2002).

In alignment with information design principles and sustainable standards, participants chose the labels that were simple and minimal in design, and with clear instructions. The label was re-designed to address these issues, as shown below.

3.6.3. T-shirt and packaging

As the participants commented on the importance of appearance, price and quality when purchasing fashion, a white T-shirt with a slogan was selected as the fashion item to carry the garment label. A white T-shirt is also a timeless fashion item that can be made of eco-friendly materials and known in

fashion history to impart messages and statements that can be worn by male and females which are all important factors when creating sustainable fashion. Furthermore, an aesthetically pleasing message is more efficient and more effective, and can create a good first impression (Pettersson, 2010; Waller, 2011).

The outcome and feedback from the interview were positive. To begin with, the participants felt that the T-shirt was well designed, and the chosen brand was tasteful.

A packaging concept for the white T-shirt was also introduced. An important consideration when creating sustainable products is the use of materials. Manufacturing procedures, particularly in the textile industry, can cause water pollution and environmental effects. The environmental impact when choosing materials for sustainable items is therefore a vital factor to consider (Mackenzie, 1991). Assessing the material choices and their impact on the environment throughout their use and taking into consideration the fact that all materials could be recycled and have biodegradable advantages, was vital in the process of the creation of this project. The responses from the focus group gave input to the selection for the T-shirt print and the choice of T-shirt material, which was made from 100% organic cotton with minimal ink impact for the print (Figure 4 and 5).

FIGURE 4

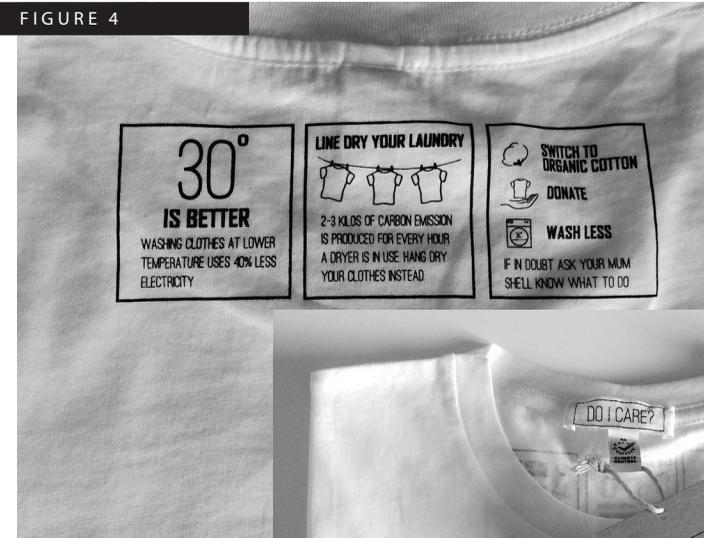


FIGURE 5

T-shirt with minimal ink impact (front and back, respectively)



To produce a sustainable outcome for the packaging, eco packaging was researched to gather inspiration and, to follow sustainable standards 100% recyclable card was chosen.

Although participants were positive towards the initial packaging idea, they thought the design could benefit from additional features to create a diverse brand experience for the consumer (Hess and Pasztopek, 2010). However, the choice of material for the packaging created initial concerns for the printing process. The heavy card choice could only be screen-printed to achieve a high print standard. The type font had to be adjusted several times to achieve a good quality and readable print, and to make the pictures, color and layout clear and accessible (Lipton, 2007; Petterson, 2010; Waller, 2011; Lonsdale, 2014).

The packaging was consequently redesigned to become a reusable item to achieve long-lasting visual brand awareness and to replace plastic packaging and unnecessary waste.

Once the packaging was tested on standard recyclable card the final product was cut with a laser cutter to produce a clean cutting line. This process had to be repeated several times to achieve the exact measurements required to be able to wrap the packaging around the T-shirt and then for it to be reused as a coat hanger to hang the T-shirt (Figure 6 and 7). All in all, the packaging had a successful outcome and participants mentioned that it could be a good reason to purchase the product and at the same time replace plastic hangers.

FIGURE 6



FIGURE 7

Packaging re-design (folded and hanged, respectively)



3.6.4. Video

The video's purpose was to be utilized as a communication tool with consumers through social media, since this was something that was raised several times in the previous research stages.

At this stage, four existing videos taken from YouTube channels were shown to participants. The videos were all different in terms of content and length, and the participants' comments were that videos need to be short and informative with no animation or comic characters as these would not be taken seriously by the viewers. These findings from the focus group generated further design ideas and were vital for the next stages of development of the design project.

A video was created and went through several modifications making sure that the text displayed on screens was easy to read, and that pictures, color and layout were clear and accessible (Lipton, 2007; Petterson, 2010; Waller, 2011; Lonsdale, 2014). Furthermore, following participants' feedback, the storyline was kept simple and consistent with the rest of the brand, making sure that the information held the viewer's attention when: a) clear and distinct typography was used; b) the rhythm, layout, and pace were not predictable nor too boring; c) only a limited number of information elements were shown at the same time (Petterson, 2010; Tetlan and Marschalek, 2016). For this reason, simple images with clear messages were displayed and, most importantly, some simple advice on how consumers can make small changes to make a difference to the environment was included.

3.6.5. QR code, video and landing page

The final garment label was printed with the QR code, which was created with an online provider. A landing page was also created.

Once the video and landing page were assessed with participants and seemed to be satisfactory, all three elements were linked so they could be accessed via the QR code. The QR code was printed on the packaging and garment label (Figure 8), which could be scanned with a mobile phone to take consumers directly to the landing page/website and video (Figure 9). Communication is not complete until the intended users understand the message, so that testing the designs with the audience is important (Petterson, 2010; Lipton, 2007). Once the landing page was tested and activated, the video could be shared through social media or other devices to make sure the "Do I Care?" information strategy achieved maximum exposure.

3.7. Interview

The final interview conducted with four participants (aged 17 and 18 years old) allowed for final modifications on the design outputs.

The outcome and feedback from the interview were overall very positive. To begin with, participants felt that the T-shirt was well designed, and that the chosen brand was tasteful and fashionable, which is an important factor. The choice of creating a white T-shirt was important

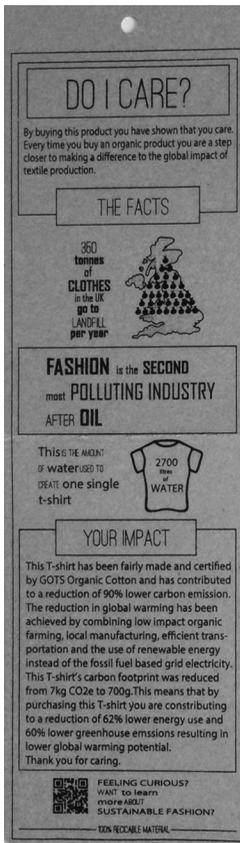


FIGURE 8

Garment label with QR code



FIGURE 9

Landing page

Visible Language 5.2.3

as it is a unisex item and will not fall out of fashion as it is timeless, which is essential when designing sustainable fashion.

The packaging also had a positive response, with participants mentioning that young consumers would buy the product because of the interesting look and usability of the packaging.

The QR code printed on the garment label worked well from all mobile phones. This was an important factor as mentioned in the previous focus group. The QR code not only helps to link the item to a website, it also reassures consumers that a product is an original and legitimate brand. Therefore, it is vital that a QR code is fully functioning for consumers to experience and embrace the whole product.

Participants were further shown a short video (this time a video developed from scratch and to serve as a companion to the other design outputs), which they found informative, with a good choice of images and text.

4. Conclusion and discussion

This study explored ways of communicating sustainability issues of the fashion industry to young consumers, in order to make a positive impact through information and garment label design approaches.

Previous research findings claim that due to today's marketing strategies of retailers and consumers' engagement with technology, we, as a society have the knowledge base to make sustainable choices (Jalas, 2004). However, the findings of this project reveal an important gap between sustainable fashion offerings and consumer awareness despite all the technological advantages and use of the internet in the UK, one of the

most important points being the lack of awareness amongst consumers of the impacts, care and disposal of fashion items (Fletcher, 2008).

The way we grow as individuals and our constant changing taste and appetite for new items affects our values. These constant changes and needs for new things pose a problem for environmental issues. Furthermore, the lack of information and understanding of the meaning and ethics of sustainable fashion support creates confusion amongst consumers, in particular the younger generation (Thomas, 2013). This is problematic because this is the generation that can help shape the future and possibly make considerable changes to society's purchasing habits in the years to come.

The present research study therefore supports the need to educate young consumers and engage them with sustainable fashion. Moreover, this research shows how, once consumers have been educated, they can empower themselves with knowledge and thus change their purchasing behaviors. Thus, for fashion businesses to achieve similar outcomes, greater efforts at transparency and higher levels of communication amongst them and their consumers must be achieved.

The primary research carried out for this study also revealed that impacts on the environment by the fashion industry are not something consumers are aware of or concerned about (e.g. the use of natural resources, water pollution, chemicals used in clothing manufacturing). Thus, such issues need to be shared with consumers to draw attention to the true nature of the problem.

To that end, it seemed important that to communicate and relate effectively with young consumers a brand and a fashionable product that would put the garment label into context, as well as fulfil the target audience's needs and expectations had to be formed. The brand "Do I Care?" was therefore created for this purpose, as well as a T-shirt and respective packaging (both displaying information on sustainable fashion). According to feedback, it also seemed important to include digital companion design outputs that would strengthen the importance of the information on the garment label, as well as entice further the interest of young consumers in information about fashion sustainability. This was achieved through the creation of a QR code that was linked to a landing page/website and a video.

In terms of methodology, the user-centered approach taken during the creation of the design outputs, where participants' input and feedback on materials and final design were considered at all times, was vital for the success of the design solutions here presented. Moreover, such an approach led to further design outputs that were not initially thought of. All in all, this project achieved the aim of educating and informing young people by opening up communication and creating visually engaging information which can be shared with others.

When these issues were discussed and evidenced in the study, the findings showed that by creating short and sharp interactive information the basic knowledge of consumers increases. This validated the research findings and confirmed that with the creation of mediums such as video and social media promotions, designed appropriately for the target audience, they can indeed change consumers' purchasing perceptions

(future research could be conducted to further validate the issues raised in this paper with a wider group of potential users, and feedback could also be gathered from retailers).

The final decision, however, lies with the consumer. Firstly, before embarking on a decision to purchase sustainable items, consumers must break existing habits and embrace the meaning of sustainable fashion. Therefore, to be able to achieve this, a knowledge base and the creation of sources of information to increase that knowledge, for young consumers in particular, where ethical and sustainable fashion is concerned, is crucial. Only then will we be able to make the correct purchasing decisions. In other words, as the political T-shirt designer from the 1960's Katharine Hamnett once said; a successful T-shirt has to make you think but then, crucially, you have to act.

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