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Designing a fashion driving forces website as an educational resource

Abstract

Electronic educational resources support search activities and manipulate information effectively in learning environments, thus enhancing education. This paper discusses the development of an electronic timeline database that classifies design and fashion details; technological developments; socio-economical influences; availability and popularity within fashion trends; marketing and distribution; and influential people including designers, in a manner that facilitates ease of cross referencing events at the same point in time for a rich analysis of fashion. The study focuses on the driving forces of fashion during the 1920s as a starting point for a much larger database. The data is presented in the form of a website allowing students to better understand fashion trends with macro-environmental and marketing strategies. The electronic resource is a useful tool for fashion, textile and marketing students as an educational interface providing design, production and marketing data for fashion-related products particularly useful for the analysis of fashion trends.

Keywords: Educational, Driving Forces, Fashion, Trends, Marketing

1. Introduction

With the help of computers and the internet, information is now far more readily accessible for a range of purposes (Asaolu 2006; Forsyth 2001; Holmes and Gardner 2007), which has had a profound impact on the learning and teaching environment where electronic educational tools are fast emerging (Forcier 1996; Mason and Rennie 2008). Such resources enable statistical analysis processes, bibliographic searches and information retrieval to be undertaken with relative speed and ease (Littlejohn *et al.* 2007).

Even more than ten years ago authors such as Resnyansky (2002) and Garrison and Anderson (2003) had recognised that the replication of volumes of information in an electronic context was becoming central to higher-education. Today, the internet provides benefits for research and online learning purposes through a wealth of support and through a rapid expansion of Web-based resources (Rudestam and Schoenholtz-Read 2010). In addition,

when used in higher-education such resources could complement twenty first century students' preferences for constructing their knowledge through exploration, active participation, and interactions (Van den Broek 2012). Electronic resources can help tutors to create, and students to participate, in interesting and effective learning and teaching environments (Wegerif and Dawes 2004). Holmes and Gardner (2007) recognise the potential that electronic resources have to offer, and Poley (2010) states that electronic educational resources encourage students to view the computer as a tool for creating, accessing, retrieving, and presenting information effectively and flexibly.

Therefore the importance of electronic educational tools for research purposes at all levels of education has increased, and as a consequence such resources specifically designed for the field of fashion and textiles would benefit students, researchers, academics and professionals. Current electronic resources for this particular sector include sites such as www.fashion-era.com/flapper_fashion_1920s.htm, www.squidoo.com/1920s-fashion/ and www.1920s-fashion-and-music.com. Other sites which provide information on online marketing tools for fashion retail can be accessed, through for example, www.apparesearch.com, and fashion search engines www.fashlink.com and <http://www.fashionotes.com/> also exist. However, such existing resources provide limited information usually covering only one or two specific issues related to fashion that is of interest to the fashion bloggers. This makes it difficult to understand the given information in a holistic manner that is necessary for the analysis of trends. These sites also lack any full bibliographical details that are essential for students and researchers when reporting their research. This study provides a platform for the development of the first electronic educational resource for fashion-related studies which aims to eventually provide extensive data to enable relationships between product, events and people to understand trends through the main driving forces of fashion at any point in time during the past three centuries. The current resource however deals only with the 1920s while the tool is under further development.

The aim of this study is therefore to develop an electronic prototype of the proposed tool which will aid the process of identifying relationships between events, product availability and style to appreciate how apparent investigating driving forces affect fashion related products at any one time. This paper discusses the development of this tool plotting events from the 1920's as an example. This is achieved through the development of an electronic database in the form of a timeline which catalogues design and style details of fashion apparel; developments in production and manufacturing; influential people including

designers and other popular public figures; and marketing strategies, in particular developments in retailing, advertising and promotional efforts. It then evaluates the tool as a fashion research resource through an in-depth focus group exercise using feedback from Undergraduate, Masters and PhD students.

1.1 Research methods

In order to evaluate the usability of the website between different levels of fashion students a focus group was devised where the respondents worked through strategically designed tasks. This method essentially involved, among other data gathering methods, an intensive discussion focused on particular issues using eight randomly selected fashion related students (2 BA level, 3 MA level and 3 PhD level). The focus group began with an explanation of the test and browsing time, participants are asked to complete two tasks aiming to assess the usability of the website followed by an in-depth group discussion with an open questionnaire designed around seven distinct issues; quality of welcome, navigation and information construction, information foraging, the purpose of the homepage, the design of the page layout, contents usability and the enjoyment of using this website.

2. Rationale for the research

A general definition of fashion is a popular style or practice in the present or a set of trends that have been accepted by a wide audience (Brannon 2010). Fashion includes what people wear, such as clothing, footwear, accessories and makeup, and other things that people acquire for themselves and for the home such as furniture, home-ware and furnishings to create desirable environments, all of which can be seen as an expression of the times (Frings 2007). Brannon (2010) refers to fashion as a complex phenomenon from psychological, sociological, cultural, or commercial points of view. Hence, in order to investigate the fashion trends it is necessary to explore all of the inter-related drivers, including economic, technological, social, cultural and political events, plus other influences that shape society. McKelvey and Munslow (2008) declared that it is beneficial to analyse integrated macro-environmental forces of economics, technology, politics, society, lifestyles, attitudes and consumption patterns for fashion forecasting, also supported by Perna (1987).

In the first instance, an extensive research study was undertaken by the second author to catalogue inventions, events and other influences in relation to available materials and popular design features. A timeline database was developed using Word consisting of five general strands; technical developments, availability, trends, general influences and

marketing influences from the end of the seventeenth century, just prior to the onset of the industrial revolution, to the onset of the new millennium. Originally the timeline was used to understand the development and growth of the colour forecasting sector. Each strand, except availability, was further divided for ease of data collection and presentation. Technology was divided into spinning and yarn development, weaving, knitting, dyeing and finishing and garment production, each having a separate strand and documenting inventions and further developments in the related technologies. The trends strand was divided into colour, fibres and fabrics and style; examples and text were used to document the popular design features throughout the time period under study. The availability strand documents all materials that could be used for fashion design at any one time to appreciate designers' choices in the actual trends. General influences were divided into designers, public figures and other, which covers events, laws and regulations imposed rather than people. The marketing influences strand was divided into retail, advertising and promotion, and other, which includes aspects such as developments in printing which aided the fashion media sector. The original format served its purpose at the time however, the vision for the timeline database as a more comprehensive research resource for students and researchers of fashion trends demands a more sophisticated format for ease of use, for ease of adding more data into the system and to make it a more interactive tool. It is also desirable to extend the type of data to include aspects related to the home and popular culture in order to cross disciplines in order to explore lifestyle trends. Understanding the inter-relationships of the driving forces in the past and seeing their trajectories evidenced through the visual data provided by the tool will enable more accurate insights into today's drivers and trend trajectories.

3. The tool design

Informative web design transforms data into valuable, meaningful information by identifying and explaining the relationships and patterns between sets of data (Shedroff 1997; Brannon 2010). The organisation of data adds value by showing order, connections, and relationships (Flacks and Rasberry 1982; Wurman 1989; Brannon 2010). Grouping similar things together and naming that group forms a category. One form of categorising involves recognising the similarities between the items - the aspect that shows that they belong together. Another form of categorising involves recognising differences between items or groups of items - the aspects that make each distinctive (Brannon 2010).

Fashion concepts can be organised by historical timelines, product development sequences or through an evolution of a trend (Brannon 2010). The 1920's driving forces of

fashion and fashion-related products website was organised through a series of parallel horizontal timelines using the Adobe Dreamweaver CS4 HTML programme. The original format used continual vertical timelines that ran from the first page of the word document through to the end. The user had to use the scroll facility to move through the data, though the 'find' facility and the 'go to page' facility could also be used to move more quickly to specific known by historical timelines data. The new timelines still comprise the original strands under the original five categories (technological developments, socio-economic, availability & popularity, influences and marketing & distribution), but the format is now flexible allowing new strands and new categories to be added by the tool designer which enables the data to be expanded; this was not possible with the static format of the former word document. A home page, shown in Figure 1 now replaces the original contents page providing a more informative guide to the tool.

3.1 Discussion

HTML (Hypertext Mark-up Language) is a method of describing the format of documents which allows them to be viewed on computer screens which then allows programmes to navigate across networks and to display a wide variety of information types (Bates 2006). The principle which underpins HTML is to take some structured content, a mix of text and images, and then to add the formatting instructions.

One of the most important features of web documents is that they can contain hyperlinks which allow users to access further information, including appropriate bibliographical information, and relevant images. Therefore, HTML was selected as the most useful software programme in order to create a structured web page which can take advantage of hyperlinks to build an effective educational tool. However, there were a few major considerations, the first of which being user-friendliness; the tool design must allow for ease of navigation. The most common method to facilitate navigation is to incorporate an index, we provide this at the top of each page. We also provide hyperlinks to return to previous pages (see Figure 2). In addition, the easiest way to navigate is generally through the use of frames and tables. Using a frame makes moving through the site easier and tables are a part of the page layout on the web pages (see Figure 3). Designing a left side frame with the list of the hyperlinked texts with underlines ensures that links to pages are always available on the screen and by clicking any part of the tables or any underlined texts in the left side frame, users can easily move to the other pages (see Figure 4).

The second consideration was the importance of developing an informative website. The structure of the site was developed in a manner that allows users to easily navigate to and through the information in which they are interested in. On each of the five driving forces pages, users can get a general understanding of each of the categories by reading the brief explanations on each and also use the tables where explanations are shown of the types of sub-categories which are included (see Figure 5). Each timeline page was structured using horizontal timelines and the vertical line of the sub-categories of fashion driving forces to offer information so that users see it on screen. Scrollbars enable lots of information to be seen on one screen. Additionally, references in the texts from the body of each timeline pages are hyperlinked to the full bibliography and relevant images (see Figure 6 and Figure 7). Colours and texts are used to make sure that the texts are clear and legible when viewed on screen.

3.2 Overview of the five categories by using the tool

The category of technological developments is subdivided in to fashion (textiles/ production) and fashion-related (materials/ production) types. Particularly, it includes spinning & yarn, weaving, knitting, lace-making, leather, fur and dyeing & finishing and in the section of fashion textiles (Elsasser 2005) and apparel (garment, underwear, hosiery), accessories (footwear, bags, belts, hats, gloves), and Home (soft furnishing, carpets/rugs, linen) are contained in the section of fashion production (Jernigan and Easterling 1990). In the section of fashion-related, there are also some types of technological developments; metals, gems & stones, ceramics & pottery, glass, wood and paper in the materials section (Lefteri 2006); body (jewellery), home (tableware, ornaments etc, glassware) and interior (furniture, wallpaper, tiles & flooring, lighting) in the production section (Pile 2007). In this category, the key inventions, methods and techniques typically in use for the manufacture of the fashion products of the day are detailed.

Consumer buying behaviour is influenced by cultural, social, and personal factors. Cultural factors exert the broadest and deepest influence. Culture, subculture, and social class, as the fundamental determinant of a person's wants and behaviour are particularly important influencers on consumer buying behaviour (Foxall *et al.* 1999). Fashion marketing decisions are affected by developments in the political and legal environment that is composed of laws, government agencies, and pressure groups that influence and limit various organisations and individuals (Kotler and Keller 2006). The available purchasing power in an economy depends on a variety of economic, social and behavioural conditions. It is significant to pay attention

to trends affecting purchasing power because they can have a strong impact on business, especially for companies whose products are geared to high income and price-sensitive consumers (Kotler and Keller 2006).

The category of socio-economic as a part of macro-environmental forces has four sub-categories - legislative influences, social & cultural, consumerism, and economical influences (Arnold 2009; Massey 2001). In particular, the section of legislative influences includes political & legal, educational and environmental forces and the social & cultural section consists of events, movements, beliefs, morals, ideals and behaviour forces. The key macro influences including events, statistical and more general information related to the economy and to society are detailed in this category.

Fashion trends include an overview of lifestyle and fabrics; a focused outline of key fibres, yarns, wovens; knits and prints; essential colours and colour combinations, conceptual imagery with related fabric swatches (McKelvey and Munslow 2008). To overview the 1920's fashion trends including products, styles, colours and materials that can be possible to identify and present what was popular in the 1920's period and also the fashion availabilities and popularities put them into the context of cultures and lifestyles of the period.

The category of availability & popularity is composed of fashion and fashion-related products, styles, colours and materials for the investigation of 1920's fashion trends. A 1920's electronic timeline database cataloguing details of availability and popularity within fashion and fashion-related products by evidences and examples is shown in the web. The popular styles and designs of the day are given in this section for each of the fashion-related product types including materials, colours and specific product types, and images support the text.

The category of influencers consists of designers, public figures and companies & groups. Trend reporting is progressed by describing a look, a mood or spirit, a lifestyle message, a tie in with a celebrity, a target market, a brand image or designer's name, a concept, a source of inspiration and a popular culture influence such as a hit movies or TV series (Brannon 2010). This progress aims to explain what is happening, why the trend is developing, and who is leading the trend. Generally, designers, fashion stylists, illustrators and graphic designers take inspiration from lifestyle trends, street and urban culture, music, merchandise and a wide variety of art (McKelvey and Munslow 2008). In this category, designers, public figures and fashion and fashion-related companies & groups which played a part in influencing trends are included. Specifically, it includes designers from various design fields such as fashion, textiles, jewellery & accessories, furniture, ceramics, furnishings, interiors, artists and architects and the public figures section is composed of monarchs, actors/actresses,

singers/musicians, other celebrities and activists.

Marketing is the activity and the process for creating, communicating, delivering value to customers and exchanging offerings such as ideas, goods or services with customer satisfactions through different channels (Belch and Belch 2009). Distribution of fashion products can happen through multiple channels. A simple way to identify them is composed of distinguishing the physical places (stores) from those virtual ones (websites and e-commerce) with the addition of catalogues (Pedroni 2012). Advertising through mass communication channels, public relations, personal selling and sales promotion campaigns are used for making sales and communicating with consumers (Kotler and Amstrong 2008). In this category, the key inventions, methods and techniques typically in use to support the sales and marketing of products including retail strategies, influential retail brands, advertising, promotion and other influences are detailed. Particularly, it includes boutiques, department stores, mail order, online shopping and visual merchandising for the section of retail. In the section of marketing, it consists of magazines, posters, photography, signage and celebrity endorsement.

4. Evaluation and results

The focus group session began with the moderator giving an explanation of how the test was to be conducted. Participants were then allowed to individually browse the website for 10 minutes and then were asked to complete two particular tasks both related to assessing the website. Participants were given 20 minutes to complete both tasks. The first task was to explore the site in order to note what had happened in the year 1925 taking examples from each of the categories of the fashion driving forces (technological developments, socio-economics, availability & popularity, influences, marketing & distribution). This task aimed to assess the usability of the vertical lines of information across all of the categories. The second task was for the participants to investigate what had happened in the field of advertising and promotion throughout the decade of the 1920's. In order to achieve this task the participants needed to explore that one particular sub-category that appears under the marketing & distribution section. This particular task aimed to assess the usability of the horizontal lines of information across the ten years of the decade.

In the second part of the focus group session the participants were asked to take part in an in-depth group discussion. This discussion was facilitated through the use of an open-end questionnaire which focused on seven distinct issues; quality of welcome, navigation and information construction, information foraging, the purpose of the homepage, the design of

the page layout, contents usability and the enjoyment of using this website including its fitness for purpose. This session allowed a deeper understanding of the website as an educational resource to be explored as well as the identification of suggestions to improve. Using a small number of participants allowed for a thorough and constructive evaluation of the tool.

According to the discussions, the quality of welcome was good in general but participants suggested to use simple images than texts to simplify the first page and that will be able to encourage users to use it. The category of navigation and construction was evaluated by asking about the clearness of category and link names. The participants agreed that the category names and link design were clear and simple to use and understand but they also recommended to insert arrows to the clickable parts to make it sure for users to click them. The informative value of the website were highly rated and they mentioned the information was really interesting and useful to know about integrated information of 1920's fashion driving forces. Therefore it was highly recommended to develop continually updated information of the other periods as a research tool. The participants stated that appearance of the purpose of the homepage was obvious however, it will be better to explain more details of the targets who can use it and the aims what it is for. The category of design of page layout was highly valued particularly, they thought that the layout of the first homepage was very good for different styles of users; people who prefer to read and click the left side bar and vertical line's categories; the other group of people who like to try the main and middle part of the page first. The colour scheme also was highly valued by the participants. Again, the layout of the first homepage and second linked pages of each category were highly rated but they suggested that to provide more pages of each sub-category would be useful for users to understand more details of the categories and also, to create other pages of each year across the categories. The category of the usability of contents was also highly valued as it is important to use the website effectively. They mentioned that the contents and presenting contents information were simple and clear with aesthetically pleasing manner and the presenting texts were readable. However, they suggested that it would be better to make the titles of each page larger. It was highlighted that enjoyable is the most important factor that gives a nice impression to users and this category was also highly rated by the participants. They stated that it was very much enjoyable and interesting for research and it was very well organised to search the information and the related full references of the information. Additionally, they emphasised that the website will be useful tool for an integrated fashion study such as fashion design, trend, branding and marketing. Providing other periods within a

same structure can be invaluable for fashion research with more photos and links with other websites. Also, it was suggested that designing 'zoom in' function for timeline pages and supplying a tutorial page for explaining this website will be nice. They thought that the outline of this website can be applied for fashion brands, manufacturers or retailers to develop their timeline data base. The overall findings from this discussion are given in table 1.

Table 1 about here

5. Conclusion and discussion

This paper has introduced and explored the driving forces which are relevant to fashion and fashion-related products and discussed the importance of developing a structure for an integrated fashion research website. The paper explains the development of the fashion driving forces website as a fashion educational resource focusing at this stage of the research on the 1920's decade to produce an electronic timeline database organising five categories: technological developments, socio-economical influences, availability & popularity, influencers and marketing & distribution. Each category has sub-categories including several specified sections to produce more precise information. The website allows users to understand and compare various fashion driving forces and also a full bibliography is provided. The site has been evaluated through a focus group activity using eight fashion related students who would be potential future users of the tool. The primary research activities were used to evaluate the quality of welcome, navigation and construction issues, the value of the information, the purpose of the homepage, the design of the page layout, the usability and the enjoyment values of the web interface among the group. The results showed that the 1920's fashion driving forces website appears that there is a positive potential for an integrated fashion research tool as an electronic resource. On average it was found that the student participants declared to use the internet for research purposes including information gathering for around 6 hours per session. All of the participants agreed through the discussions that online research tools are becoming more important now and that this particular tool has the potential to be a very useful resource in order to understand and produce integrated sets of fashion information across different categories and sub-categories from macro-environmental factors to fashion marketing and distribution. Also the participants declared it to be of great advantage to review a certain period's fashion and a fashion company's history if this particular structure could also be applied to fashion companies. An additional suggestion was that it would be invaluable to develop more pages for extending the

period from 1920's to the recent times using the same structure of the current website with some improvements by following the focus group discussions; which is indeed the future plan. The evaluation results of the 1920's fashion driving forces website by the participants suggest that the website has exemplified a good electronic resource for integrated fashion research. Overall, the participants found this to be an interesting and effective resource to use in order to study fashion in an integrated manner and a potentially useful tool for all round fashion research.

As the research develops further, more extensive primary research with a wider participation of students / potential users is required in order to further test the same issues but for a much more complex tool. However, for this early stage of the research the findings are sufficient to warrant further development of the website tool. The authors would like to thank the Creative & Cultural Industries Hub at the University of Leeds for the provision of the research funding that was secured through the Support for Impact and Innovation Heif V Funding scheme.

References

- Apparelsearch, 2014. [online] Available from: <http://www.apparelsearch.com/> [Accessed 15 October 2014].
- Arnold, R., 2009. *Fashion: a very short introduction*, Oxford: Oxford University Press.
- Asaolu, O.S., 2006. On the emergence of new computer technologies, *Educational Technology & Society*, 9 (1), 335-343.
- Bates, C., 2006. *Web Programming*, Chichester: John Wiley & Sons Ltd.
- Belch, G.E. & Belch, M.A., 2009. *Advertising and Promotion*, New York: McGraw-Hill Companies.
- Brannon, E.L., 2010. *Fashion Forecasting*, New York: Fairchild Publications.
- Elsasser, V.H., 2005. *Textiles: concepts and principles*, New York: Fairchild
- Fashionnotes, 2014. [online] Available from: <http://www.fashionnotes.com/content/2013/06/your-online-shopping-solution-wanting-launches-fashion-search-engine/> [Accessed 15 October 2014].
- Fashion era, 2014. [online] Available form: http://www.fashion-era.com/flapper_fashion_1920s.htm [Accessed 18 October 2014].
- Fashion & Music, 2014. [online] Available from: <http://www.1920s-fashion-and-music.com/> [Accessed 15 October 2014].
- Fashlink, 2014. [online] Available from: <http://www.fashlink.com/> [Accessed 15 October 2014].
- Flacks, N. & Rasberry, R.W., 1982. *Power talks*, New York: Free Press.
- Forcier, R.C., 1996. *The Computer as a Productivity Tool in Education*, New Jersey: Prentice-Hall.
- Forsyth, I., 2001. *Teaching & Learning Materials & The Internet*, London: Kogan Page.
- Foxall, G.R., Goldsmith, R.E. & Brown, S., 1999. *Consumer Psychology for Marketing*, London: International Thomson Business Press.
- Frings, G.S., 2007. *Fashion: from Concept to Consumer*, New Jersey: Pearson Prentice Hall.
- Garrison, D.R. & Anderson, T., 2003. *E-Learning in the 21st Century*, New York: RoutledgeFalmer.
- Holmes, B. & Gardner, J., 2007. *E-Learning: concepts and practice*, London: SAGE Publications.
- Jernigan, M.H. & Easterling, C.R., 1990. *Fashion merchandising and marketing*, New York: Macmillan.

- Kotler, P. & Armstrong, G., 2008. *Principles of Marketing*, New Jersey: Pearson Prentice Hall.
- Kotler, P. & Keller, K.L., 2006. *Marketing Management*, New Jersey: Pearson Prentice Hall.
- Lefteri, C., 2006. *Materials for inspirational design*, Hove: RotoVision SA.
- Littlejohn, A., Cook, J., Campbell, L., Sclater, N., Currier, S. and Davis, H., 2007. Managing educational resources. In G. Conole & M. Oliver (Ed.), *Contemporary perspectives in E-Learning research*, New York: Routledge.
- Mason, R. & Rennie, F., 2008. *E-Learning and Social Networking Handbook*, New York: Taylor & Francis.
- Massey, A., 2001. *Interior design of the 20th century*, London: Thames and Hudson.
- McKelvey, K. & Munslow, J., 2008. *Fashion Forecasting*, Chichester: Blackwell Publishing.
- Pedroni, M., 2012. Previsional Models in Fashion and in Cultural Production. In J. Berry (Ed.), *Fashion Capital: Style Economies, Sites and Cultures*, Oxford: Inter-Disciplinary Press.
- Perna, R., 1987. *Fashion Forecasting*, New York: Fairchild Publications.
- Pile, J.F., 2007. *Interior design*, New Jersey: Pearson.
- Poley, J., 2010. Globalization in Online Learning. In K.E. Rudestam & J. Schoenholtz-Read (Ed.), *Handbook of Online Learning*, California: SAGE Publications.
- Resnyansky, L., 2002. Computer-mediated communication in higher education: educators' agency in relation to technology, *Journal of Educational Enquiry*, 3(1), 35-59.
- Rudestam, K.E., & Schoenholtz-Read, J., 2010. *Handbook of Online Learning*, Los Angeles: SAGE Publications.
- Shedroff, N., 1997. Information interaction design: A unified field theory of design. In R. Jacobson (Ed.), *Information design*, New York: MIT Press.
- Squidoo, 2014. [online] Available from: <http://www.squidoo.com/1920s-fashion/> [Accessed 15 October 2014].
- Van dan Broek, G.S.E., 2012. Innovative Research-Based Approaches to Learning and Teaching, *OECD Education Working Papers*, No. 79, OECD Publishing.
- Wegerif, R. & Dawes, L., 2004. *Thinking and Learning with ICT*, New York: Routledge.
- Wurman, R.S., 1989. *Hats*, New York: MIT Press.