

CONSIDERING “DESIGN WITH INTENT” WITHIN GRAPHIC DESIGN AT A UNIVERSITY OF TECHNOLOGY

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Abstract

Although based in various design disciplines the concept of user centred design (UCD) and “design with intent” has been linked to the notion of “human-centred principles”, “design for behavioural change”, “persuasion technologies” and “interaction design” at international design institutions for some time. Understanding how user behaviour can influence technological solutions is critical for designers wishing to effectively tackle social issues such as eco-solutions, effective wayfinding design as well as the design of information brochures/pamphlets. Designers influence behaviour from a distance through the creative products and services that are produced based on their understanding of user behaviour. According to design consultancy FROG designers acknowledge that instead of aspiring to influence user behaviour from afar there is a need for the products that are designed to have more immediate impact through direct social engagement. Although this aspect of the teaching of design is usually entrenched within a new media, interaction design or usability/service design department the notion is linked so closely to certain existing concepts within graphic design that it makes sense to include aspects of this within a re-evaluated graphic design curriculum.

Key Words: *user-centred design, design with intent, human-centred design, sustainability, graphic design education*

“The central problem of the designer is not the construction of graphics, products, services, systems or environments, but the creation of means for people to act, to interact, to realize their wishes and satisfy their needs.” – Jorge Frascara (1988)

Introduction

This paper is based on exploratory research in progress towards a doctoral proposal. The paper draws on human-centred design discourse as a key theoretical framework to develop a responsive teaching strategy within a creative production pedagogical framework that will orientate graphic design students in the application of human-centred principles to the development of graphic design products.

Increasingly, there exists a demand for social and ethical issues to be addressed within design curricula (Joubert & Economou 2009:98). The current graphic design curriculum at the Vaal University of Technology (VUT), a South African University of Technology (UoT), is firmly encased within the “traditional” view of what constitutes graphic design practice. This view is based primarily on the perception of what is required of a graphic design graduate by the graphic design industry. Presently this curriculum does not engage with the social context of “design with intent” or the human-centred principles and practices increasingly found in the field of new media, interaction design and some service design courses. This paper aims to delineate a problem within graphic design education at a South African University of Technology and provide a brief overview of the existing graphic design curriculum at the VUT.

A further objective of this research is to create awareness in graphic design students of the human being who is ultimately interacting/using/engaging with their creative product. To be able to do this successfully within a socially and culturally diverse context such as South Africa is a challenge. The supporting objective of the research is the development of a set of guidelines for the teaching of graphic design at the VUT. To this end this paper will highlight concerns within the graphic design curriculum at VUT, showcase selected trends in international design education and contextualise the notion of human-centred design principles within a revised graphic design curricular framework.

The proposed methodology for this research will employ a qualitative research design based within the Functionalist theoretical paradigm. The teaching strategy to be developed will include aspects of Scrivener’s model of creative production and will consider Schon’s theories of professional practice thinking as reflection on emerging practice.

Background

According to Frascara (1997:2), design is a “problem-oriented, interdisciplinary, creative action that needs to consider individual users in order to be most effective”. It is generally assumed that design refers to a product which came into being through the combined efforts of a creative individual and a manufacturer. Although design has utilitarian roots, designers are specialists, privy to an exclusive world in which they create and design aesthetically pleasing solutions to a problem usually posed by a client or user. Graphic design students are taught within an educational system grounded in practicum which clearly delineates the “us” (creative designers) and the “them” (the aesthetically challenged user). It is unusual when users are viewed as being in a position to contribute in any way to the design process. Logan acknowledges that “practicum teaching conditions hold the potential for knowledge to remain ‘sealed’” (2007:5) and warns that this “inaccessibility” has the potential to translate to the end-user. Rochfort (2002:163) comments on the gap which exists between designers and users by stating; “all too often [communication] design is still viewed as maker-centred and not user-centred”. Currently, the only module in the graphic design curriculum at the VUT in which the notion of “us” and “them” is challenged is *Web Design* (students are specifically made aware of the processes utilised by the users of their product through the design of interactive components). As Easterby (1984:28) remarks “the users of a display of any kind –print, or sign, or machines –are engaged in a truly cognitive process... [the designer is responsible for] ...those structural cues which generate plans for interactions with or exploitations of the display elements.” Therefore in order to create effective design solutions it is essential that graphic design students are taught within a system that embraces the critical role of the user as a participant in the design process.

Several scholars have begun questioning the role of graphic designers in society. Akama (2008:56) states that “designers need to think more critically about what they are doing and the cultural, social and environmental conditions they contribute to.” While discussing the role of information design in contemporary culture, Cooley (2000:61) argues that “at no time in human history have so many of our citizens felt alienated from and threatened by the society that we have created.” In 2008 at the annual American Institute of Graphic Artists (AIGA) conference in Boston, Meredith Davis, Head of the PhD in Design and Design Studies programme at North Carolina University, spoke about common assumptions about graphic design and subsequently graphic design education. According to Davis, trends that will define graphic design in the future include: “thinking about the people for whom we design as participants in the design process, designing social interaction, and the importance of understanding community” (2008:16). Two decades earlier Frascara wrote a seminal paper on graphic design entitled “Graphic Design: Fine Art or Social Science?” In it he listed the role of graphic design in society as impacting on, and influencing, users and the environment through visual communication in the community (Frascara 1988:21). To demonstrate the importance of the consideration of the user in the design outcome he showcased a visual example which, in his opinion, demonstrated a lack of professional responsibility (see Figure 1).

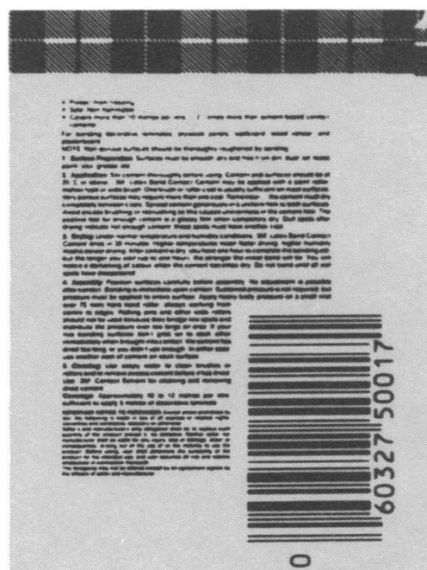


Figure 1 Label (actual size) for contact cement showing directions for use and toxicity warnings. The original label used black type on a red background (1988:22).

One can argue that given contemporary consumer guidelines this scenario would not be repeated. However, it is the premise of this paper that graphic design students have a responsibility to be aware of the potential to harm through careless design practice.

In an essay entitled *The Birth of the User*, Ellen Lupton refers to “the dominant subject of our age...user, a figure conceived as a bundle of needs and impairments –cognitive, physical, emotional. Like a patient or child, the user is a figure to be protected and cared for...” (2004:23). Lupton argues that within the interactive environment the designer has to think globally, has to consider the user and the user, in turn, has a degree of control and expectations based on the technology that they are engaging with (2004:24). In the 21st century designers create products that function across media –a logo has to appeal to users of the Web, cellular phones and tablets –it may appear in print, on a billboard or on a product. In a paper presented at the 2009 DEFSA conference Joubert and Economou concede that “social and environmental design consciousness in South Africa is still in its infancy” (2009:99). Further, they point out that much needs to be done at educational level in order to redress the balance between South Africa and first world countries when it comes to the personal value system “that incorporates social and environmental ethics” (Joubert & Economou 2009:100) with graphic design. In 2002 the Department of Arts and Culture (DAC) was created to “develop and preserve South African culture to ensure social cohesion and nation-building” (Cadle 2009:30). It is within this context that educators of graphic design in South Africa must consider whether the current approach taught within most graphic design departments answers to the user-centred, human-based needs of a diverse South African audience.

Human-centred design

The inclusion of human-centred principles into design solutions is not new. At the beginning of the 20th century the Bauhaus School (1919-1933) embraced the notion of integrating craft, existing technology, art and design in the creation of and design of various products. By providing a space where artists and craftsmen could work cooperatively the Bauhaus created the uber-designer, someone who could conceive and produce aesthetically pleasing, practical objects and who embraced the motto “form follows function”. In criticism of the Bauhaus, Winkler (1997:131) commented that “[the Bauhaus] did not question the impact of its design on the users, whose agreement was simply taken for granted.” As the user was not an integral part of the conceptualisation or the production of the design outcome the Bauhaus model of design education may not stand up to contemporary scrutiny. It was not until the 1960's that designers began to recognise the individual differences between users and their needs. It can be argued that human-centred design is rooted in ergonomics – the creation of a design solution (be it an item of clothing, a chair or a car) that “fits” whilst considering the needs of and benefitting the user. In support of this view Frascara (1997: available online) points out that commercial advertising for the past 50 years has been human-centred in that rather than being concerned with the physical descriptions of products it has concentrated on the desires and values of the user. One of the definitions of user-centred design is a “process in which the *needs, wants and limitations* of end users of a product are given extensive attention at each stage of the design process (Wikipedia: available online). According to Krippendorff (2006) human-centred design is “ideologically motivated by values that relate to transparency, participation and empowerment through influences and integration of participatory design methods.” Increasingly, design is seen as both a commercial practice and a substantial approach of cultural production and according to Akama (2009) designers are defined by what they can enable, not what by what they ‘make’.

Design education

In discussing contemporary graphic design education, Heller and Fernandes (2006) comment on the average design programme as providing instruction in “the basics while spotlighting specialities such as magazine layout, book and record covers, posters, advertising, and Web-design in order to provide students with a well-rounded, professional portfolio” (p. 26). In terms of the application of the *needs, wants and limitations* of end-users to graphic design practice, a frequent argument is that designers may find it difficult to translate these to their daily, commercial practice.

It is generally acknowledged that the primary function of a graphic designer may be to organise visual information and communicate messages. Easterby (1984:19) points out that the defining characteristics of a successful design meet at an “intersection of technologies...psychology and visual communication...engineering, ergonomics and printing.” It is important to note that for a number of

years several researchers have commented on the glut of information that graphic design students have to contend with within the current scope of design education. Bonsiepe suggested as far back as 1994 that the name of a graphic design course should be changed to Information Design and students should refer to themselves as “info-designers” (p. 48). In order to understand and later, successfully incorporate human-centredness into their design products, graphic design students must be aware of many additional but frequently side-lined components of a designers’ education. For example the psychological theory in information display – i.e. the psychological processes used in the interpretation of visual messages by the user as well as the existing user attributes which will assist the user in interpreting that message (Easterby 1984:20-24), is frequently included in interaction design courses but is an aspect almost forgotten in contemporary graphic design education.

Whilst commenting on the evolution of design education Faiola, Davis and Edwards remarked that “students are often not prepared to understand the social context of new media design and development... programs teach technology-driven courses that ignore standard practices, such as a concern for user preferences or an inquiry into the socio-cultural context of the target audience...” (2010:693). As stated previously, user “experience” is increasingly becoming a part of many product development, architecture and interface design programmes. However there is scant agreement on the definition of the “experience” as it applies to the various disciplines. Kocsis (2009:127) points out that “where the digital field is concerned, such disciplines as information design, interaction design, interior exhibition design, installation design, interface design, game design, and architecture have not begun to correspond with one another, nor established a common discourse about the phenomena of ‘experience’”. In addition, Joubert and Economou (2009:99) quote Sudick (2008) as stating that sustainability is the “new literacy” for the 21st century. As audiences are becoming increasingly visually literate a further concern is that the current curriculum, as offered at VUT, may not meet the needs of the students who wish to engage with these socio-cultural aspects and dissatisfied students “may go elsewhere to find the knowledge and skills they need” (Faiola et al. 2010:694). The concern that frequently underfunded government institutions such as UoT’s may not be able to compete with private ones in terms of the state-of-the-art offerings in hard- and software available to students, as well as in the latest developments in curriculum is a valid one.

Stanton and Baber (1998) state that “...in designing products, designers are also designing user activity, which does not occur independently of the product”. Understanding how user behaviour or activity can influence graphic design solutions is critical for designers wishing to engage with social responsibility. For example, graphic designers must be aware of characteristics such as font size and legibility when working with design for print, but graphic designers engaged with billboard design should also be aware of aspects such as visual acuity (Smith 1984:172). Visual acuity is based on the angle and dimensions of type in order for it to be legible (and therefore understood) by the viewer. It would be surprising to see characteristics dealing with these important –human-centred – aspects in any contemporary graphic design curriculum at a UoT in South Africa. Unfortunately, given the constraints of a present-day timetable few lecturers would find the time to deal with these, often seen as “unnecessary” or “outdated”, aspects of graphic design education.

Traditionally graphic designers have been taught to create design solutions based on client needs as well as the client’s aesthetic expectations. Since the inclusion of Web-design components within the graphic design curriculum, students have become more aware of the actual “interaction” of users with their design products. However these aspects are not appropriately integrated within the teaching of the theory component in the traditional subjects of the curriculum such as *Communication Design*. This stems from the perceived “separateness” of these theoretical and practical components, and, although efforts have been made to integrate theory and practice within design briefs, student engagement with the theoretical aspect of the projects remains minimal. Frascara (1998:26) cites an example of a project dealing with the design of safety symbols –the development of an effective visual communication strategy for the prevention of accidents. In that context it is imperative that students have a complete understanding of the theory and design of wayfinding and safety symbols, as a lack of knowledge of either could result in injury or death of the user. He concludes, “It is not enough for the symbols to be beautiful, clear, and visible; these are useful factors, but the real measure of the quality of the design lies in its contribution to the reduction of accidents” (1998:26).

Graphic design education at VUT

Davis identifies emerging trends for competent graphic designers as including an “increasing complexity in the scale of design challenges, thinking about the people for whom we design as participants in the design process” and takes account of “the importance of understanding community” as a key developing practice (2008:2). At the 2006 DEFSA conference, Cape Peninsula University of Technology lecturer Mel Hagen pointed out that locally design education is “out of line” with international trends and highlighted the importance of aligning design education in South Africa to developments in the field (available online). She warned that a failure to do so would result in the breakdown of national developments in design promotion.

Historically, graphic design departments in South Africa were typically situated within the old Technikon system and are now found almost exclusively at, what has become, Universities of Technology. The training associated with the now-defunct Technikon system was firmly entrenched in the vocational realm which resulted in a practicum-heavy curriculum that included minimal engagement with theoretical concepts. This “trade-school” approach was also evident in the former Technical Colleges which, for many years, served as an “entry-point” into the Technikon’s graphic design program for matriculants who did not meet the grade in terms of technical ability.

This practicum heavy approach was thus based in and supported by the misconstrued belief that graphic design education is wholly informed and determined by graphic design industry practice and not, as is increasingly believed, by an element of social responsibility. Thus, traditionally graphic design evolved from the physical engagement of students to their practice –it was not rooted in theory (bar a smattering of the history of graphic design) – and, as suggested by McGlashan “design thinking evolved from the process of design making” (2011:326). The students shaped by this system (many of whom are now the lecturers at graphic design departments countrywide) are typical of what Scrivener calls “problem-solvers” –they are familiar with the creation of useful design products or artefacts purely as a response to a known problem (i.e. client brief). Typically upon graduating these “problem-solvers” do not exhibit what Scrivener would label as competencies within a “creative-production” approach. In order to do so the artefacts produced by the “creatively competent” would have to meet the following criteria:

- *“artefacts are a response to issues, concerns and interests*
- *artefacts manifest these issues, concerns and interests*
- *issues, concerns and interests reflect cultural preoccupations*
- *artefacts contribute to human experience”* (McGlashan 2011:238).

Since the establishment of the University of Technology in 2004, an educational institution more engaged with theory and research than the former Technikons, the graphic design curriculum (in the case of this research situated at the Vaal University of Technology - VUT) has included ever-increasing theoretical components. In the future, in order to engage with the notion of human-centred design solutions in their practical work, students will require a sound theoretical base which deals with issues of a social context such as user perceptions and cognitive interactions as well as aspects of sociology such as demographics. Without the application of theory to practice the acquired understanding may remain abstract and possibly erroneous (Faiola et al. 2010:694). Currently most practical subjects within the graphic design curriculum at VUT focus on the production of graphic design outcomes based on skill acquisition and a resulting competency in various design software. This ever-increasing component of software training has expanded from a focus on two design software applications in 1995 to a module which contained five software applications by 2010. Unfortunately, given the technological nature of the graphic design industry the pressure on students to engage with ever-increasing amounts of technology is likely to remain. Through the revision of the existing curriculum obsolete or less-relevant modules (such as printmaking) may be omitted or revised for the future; however, one must remain cognisant of the fact that over-extending the existing curriculum with additional modules may ultimately be problematic.

The current graphic design prospectus at the VUT states that graphic designers are “visual communication problem solvers” who learn how to successfully answer the graphic design needs of their client. Hence the graphic design curriculum at the VUT addresses this premise by producing students who, at the culmination of their three years of study, can create competent, visually engaging design products. However, there is a concern that students are more concerned with the aesthetics of the final product and not with the process of creating a solution with a particular user in mind. Kreye remarked that “design has become a way of finding solutions. Aesthetics is just a part of this process”

(available online). Additionally Eber (2000) declares; “visual media for the sake of effect stops at the surface of the work, and the audience is lost after the initial ‘wow’” (p. 923). In support Frascara (1998) states that the “solution to a client’s need is not the production of the visual communication it is the modification of people’s attitudes or abilities in one way or another.” At the VUT graphic design students frequently engage with briefs that require a solution with a “social” slant (such as Sappi Ideas that Matter) but have had little opportunity to provide solutions to the design needs of the local community. In order to address this, in 2009, the graphic design section launched the Graphic Design Initiative (GDi) as a space where students could engage with briefs that serve local users. Although this is a step in the right direction this paper argues for a more holistic approach to the incorporation of social interaction by the inclusion of human-centred principles within the graphic design curriculum.

International trends-an overview

Internationally several Universities and private educational institutions have embraced the notion of human-centred design. Guidelines for companies for the effective implementation of human-centred design solutions into their enterprise structures abound online. Universities of Technology such as Swinburne University of Technology in Melbourne, Australia, have included elective components within the graphic design curriculum which include *Sustainable Design* (“borrowed” from the Civil Engineering department and inclusive of modules such as *Sustainable Development* and *Greening the Industry*), as well as *Climate Change* and *Environmental Management*. In addition the Swinburne course offers a module in *Communication Design Strategy* (which includes the management of “community solutions” which is closely linked to the notion of human-centredness in design) as well as a semester module called *Contemporary Design Issues* which deals specifically with “design for environmental, global and social sustainability” and “concepts of user-centred design” (available online). It can be argued that the above could be viewed in terms of “best curricular practice” and the concepts outlined here should consequently inform other curricula that wish to engage with human-centred principles.

Locally, some South African educational institutions have included aspects of human-centredness in graphic design through the incorporation of units which deal with an element of work-integrated learning and a combination of social responsibility and citizenship. However most of these types of projects still presuppose the altruistic creation of graphic design products for needy communities or are based on the interactions of the University with high school students with the aim of developing more University-ready design applicants. Although these individual projects should be commended and tend to stand on their own merit they do not address the frequent knowledge gap which exists between the designer and client. In England, institutions such as Kingston University as well as the London College of Arts are engaging with issues of social responsibility that stem beyond charity and good intentions. Another good example of this so-called “design altruism” is practiced at Western Michigan University’s School of Art where graphic design students must enrol in the school’s Design Centre for two semesters. The Design Centre provides an opportunity for students to engage with the needs of the University and community at large. In Pasadena the Art Centre College of Design has a similar programme in place.

Conclusion

The graphic design industry has been accused of thriving on income earned by creating misconceptions, rampant consumerism and the virtues of excess so prevalent in contemporary society (Kerr 2008:59). Now, at the beginning of the second decade of the 21st century, the underlying current of social responsibility and human-centredness evident in some design circles has the potential to become mainstream. A framework for sustainable and human-centred design exists in a variety of design fields such as industrial, service and product design. Increasingly, orthodox designers are advocating the benefits of promoting socially responsible roles within their practice.

The current challenge for the graphic design practitioner is to provide users with meaningful experiences. According to Gray, “designing experiences with the user in mind requires new and alternative ways of thinking about the role of design as well as the way it can fulfill human needs...By understanding users through their needs and goals – beyond the traditional marketing profiles – designers can create specifically for the individual at an enriched level” (2004:9). Some designers and educationalists are in agreement that discussions regarding the role of graphic design and sustainability must create a framework for the future of graphic design education.

In support of a new graphic design curriculum, Cadle (2009:36) argues for existing “methodologies [that] need to be adapted accordingly.” The proposed framework at the VUT will include aspects of Frascara’s model for an effective design process which stresses: “(1) a collaborative approach with stakeholders and end users, (2) an interdisciplinary research approach, and (3) an extended process that includes problem identification in the beginning and evaluative process at the end” (1997:33). A revised, responsive and reflective graphic design curriculum must be based on a combination of components that include interdisciplinary, experiential, emotive and aesthetic design factors resulting in an engaging creative outcome which informs the user and produces a socially responsible, user-aware graphic design graduate.

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Short Biography

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