2013 DEFSA conference

Design Cultures: Encultured Design

Conference proceedings of the 2013 DEFSA conference

Compilers

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PUBLICATION OF DEFSA CONFERENCE PROCEEDINGS

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The views expressed in this publication are those of the authors and not necessarily of DEFSA. Papers are published as submitted by the authors, after they have considered and included recommendations from peer reviewers.

Full papers are submitted for peer review after successful acceptance of a conference abstract. All full papers submitted to the DEFSA conference committee are subjected to a rigorous double blind peer review process. This process takes place prior to both the verbal presentation at the conference and the publication of the proceedings. Expert specialists within the field of Art, Design and Architecture are selected to perform the reviews (Reviewers list is included). Authors receive feedback in the form of a peer review report. A confidentiality clause ensures that both authors and reviewers remain anonymous during the peer review process.

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FOREWORD

Brief overview of the conference theme

The 2013 DEFSA conference was titled Design Cultures: Encultured Design. A design is shaped by the communities in which it is to operate, and, conversely it shapes those communities. Thus "design cultures" refers both to the communities of design, but also to the way in which design shapes community – "to design communities". The designer shapes and is shaped by the communities in which the designer operates.

A total of 38 abstracts were received of which 27 papers were presented over a two-day period, addressing a range of topics that were pertinent to the conference theme. All 27 papers were accepted for publication in the conference proceedings.

Subthemes

Within this broad framework, contributors are encouraged to address their papers to one of the following sub-themes and are encouraged to present both theoretical underpinnings and practical applications of their work:

1. **Individuated design**
   (practices, products, personalities, purposes, principles);

2. **Educating designers, designing educators**
   (the cultures of praxis in the academy);

3. **Design-in/for-community, community–in-design**
   (the communal in design, the design in the communal);

4. **Reflective design**
   (acts of reflection on design – 'the reflective practitioner' in community, according to Donald Schön);

5. **The symbiotic design**
   (enculturation between the designer and the natural and urban environment).

KEYNOTE SPEAKERS

Four internationally acclaimed design education visionaries delivered keynote talks at the conference. A short biography of each speaker is presented below with the title or focus area of their presentations.

Prof. Roy Marcus

Prof. Marcus graduated with a BSc in Mechanical Engineering from the University of the Witwatersrand in 1972. In 1974 and 1978, he was awarded an MSc and a PhD respectively for research work conducted in the field of the pipeline transportation of solids. In 2004, he received an Honorary Doctorate in Technology from the Technikon Witwatersrand.

Prof. Marcus was appointed to a range of positions in both the academic and commercial world and was responsible for the establishment of the Materials Handling Research Unit and was founding Director of the Science Park at Frankenwald.

From the inception of the new democracy until 2004, Prof. Marcus played an active role in the development of the new government's science and technology initiatives, acting as the Ministerial Advisor on science and technology and the Chairperson of the National Advisory Council on Innovation. He was elected as Chairperson of the Council of the University of Johannesburg in March 2006.

He is currently the Chairperson of the Da Vinci Institute for Technology Management: a private postgraduate school of business that specialises in the management of technology, innovation and people. He also chairs the Honorary Consul of the Republic of Belarus and the South African Power Utility Research Advisory Board. He is an honorary professor at the University of Warwick and the University of Johannesburg and a Fellow of the South African Academy of Engineering.

Prof. Marcus has been appointed by the Deputy President to the technical working group of JIPSA and represents South Africa as a board member of the International Sustainable Trade and Innovation Centre.

Dr. Ian Campbell

Dr. Campbell has experience in both academic and "real world" applications of CAD technology. At the 2013 DEFSA Conference he presented a paper on "Using New Technology to Improve Students' Opportunities".

In South Africa, the UK and around the world, students' learning opportunities can be disadvantaged by their geographical location, social background, physical impairments and so on. This may engender an entire culture of low expectations amongst the students, their educators and society in general.

The solution to this problem is multi-facetted and complex, and no single intervention should be seen as a panacea. However, the use of leading-edge design and build digital technology undoubtedly has a role to play.

This presentation brings an overview of some collaborative research being undertaken by Vaal University of

Technology and Loughborough University, involving high school students from disadvantaged backgrounds and with physical impairments. The students were given access to state-of-the-art computer aided design and direct digital manufacturing technologies and were able to achieve project outcomes that far surpassed the expectations of their teachers.

The specific activities undertaken and wider implications of the research are presented with a view to inspiring similar work elsewhere.

After graduating from Brunel University in 1985, Ian Campbell worked as a design engineer, first in Ford Motor Company, and later in the Rover Group. In 1989, he was appointed as a Senior Teaching Fellow for CAD/CAM at the University of Warwick, where he undertook a part-time MSc degree by research. In 1993, he obtained a lectureship at the University of Nottingham and gained his PhD, again through part-time study, in 1998. His current position, since October 2000, is Reader in Computer Aided Product Design at Loughborough University in the Design School. Currently Dr. Campbell is also engaged as the editor of the Rapid Prototyping Journal.

Prof. Eileen MacAvery

Prof. MacAvery is an art educator, graphic designer, author, and photographer. She is currently with Berkeley College serving as Professor/Chair—Graphic Design. She is the author and designer of the books Ethics: A Graphic Designer's Field Guide, East End Stories, and Teacup Secrets and the blogs www.ethicsingraphicdesign.com and www.chakraspirit.com.

Prof. MacAvery has over 25 years' experience as a creative director, art director, and graphic designer. An expert in creating integrated marketing that reaches every touchpoint, she has worked for some of the biggest names in entertainment and media marketing.

Prof. Deon de Beer

Prof. de Beer is currently the Executive Director: Technology Transfer and Innovation at the Vaal University of Technology, Vanderbijlpark, South Africa. His experience includes 10 years of industrial R&D at the AEC, supplemented by 24 years of Higher Education experience (teaching, research and management).

Last mentioned includes an 18 month secondment to Tshumisano as CEO in 2003 to establish a government agency to promote technology transfer at South African Universities of Technology. He has published widely on topics in product development, technology transfer, innovation, research development and commercialization, is a rated researcher with the National Research Foundation, was the founder/leader of Integrated product development, the Centre for Rapid Prototyping and Manufacturing (CRPM), Product Development Technology Transfer Centre and FabLab at the Central University of Technology, and serves on the editorial boards of various journals. Prof. de Beer is also a visiting professor locally and internationally.

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- Dr Bernadette Johnson (Research Support)
- Dianne Volek (DEFSA website manager)
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The following groups are acknowledged for their input:

- DEFSA Executive Committee
- Department of Visual Arts and Design at the Vaal University of Technology

DEFSA appreciates all the authors that invested a considerable amount of time and effort in the preparation and submission of the conference papers. In addition, a word of sincere appreciation is extended to the peer reviewers for reviewing the papers.

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CULTIVATING SUSTAINABLE THINKING THROUGH EMPLOYING A STUDENT-CENTERED LEARNING APPROACH

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Abstract

In order to save both the planet and the human race, society needs to take action and adopt sustainable practices and approaches. The embedded modes of operations and encultured human behavioral patterns are under attack and radical changes are required, to ensure a future that provides sustainable living conditions. Through employing various teaching and learning strategies, educators aim to convert the student's approach and encourage personal awareness that would stimulate responsible sustainability thinking and design. This paper explains how behavioral patterns can be changed through our teaching and learning approach thus contributing towards an environmentally responsible design culture and society.

The paper will reflect on a green design project, introduced to third year interior design students over the past three years. This project aimed to fulfill three objectives – inform students of the sustainability agenda, promote environmentally responsible actions and encourage sustainable thinking practices in design. The teaching and learning strategy employed for the project, focused on a student-centered approach. This approach was considered most suited since it aimed to change or transform not only the student's daily behavioral patterns but also the attitude of the community in which they operate as citizens. This response was possible if the students could experience a deeper learning process, personal growth, a degree of flexibility and an opportunity for personal reflection.

The paper will include feedback from the students and describe the wider impact that the project had on the immediate student and university community. The critical reflection will further discuss both successes and shortcomings of the project and contemplate the project's contributions to shaping a young designer's understanding, actions and design approach.
Keywords: Sustainable design, student-centered learning, sustainable self

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Introduction

Over the past 15 years I have noticed two prominent global paradigm shifts that have influenced not only my teaching and learning practices but also the approach towards my community and environment. The first paradigm shift that I refer to in this paper is the call for society to take action against the human inflicted destruction of our planet and depletion of our natural resources. The citizens of planet earth are warned daily against the dire consequences of our irresponsible actions which have already resulted in global warming, extinction of species and a reduction in food sources. The second paradigm shift relates to a radical change in approach towards education and encourages a change from a teacher-centered to a student-centered learning environment. This shift changes the role of the teacher from being the center of knowledge, controlling the student's access to information, to the person that facilitates learning and assists the student in constructing knowledge. Both paradigm shifts demand change at various levels within our societal structures and requires a radical change from the traditional, accepted norms towards embracing and adopting new practices that will alter established patterns.

In this paper I have reflected on the teaching and learning practices that I adopted to incorporate the changes requested by both paradigm shifts in a higher education learning environment. In particular, focus is placed on a recycle monitoring project presented to third year Interior Design students. This project has been presented for three consecutive years and it is therefore possible to reflect over a period of time, on the outcomes delivered through the project. The main research question that the paper aims to answer through the reflection is: How does the student-centered teaching and learning process contribute towards assisting students to be self-motivated responsible sustainable designers?

Research Methodology

The paper utilises a combination of primary and secondary data sources. An investigation into published data assisted in providing existing theories, models and practices that pertain to sustainable design and student-centered teaching and learning. Feedback was obtained through presenting a research questionnaire to students that took part in the Recycle Audit Project in 2012 and 2013. The data is collated and the findings are presented in this paper. The paper further includes the first person voice of the researcher, who was also the facilitator of the project. These reflections aim to enrich the content of the paper through including personal observations and explanations of critical decisions that were made during the teaching and learning process. Due to the author's involvement in the projects it is not possible to exclude personal opinion, specifically in the critical reflection of the project.

Towards a sustainable future

Paradigm shift to environmental responsibility

The drive towards a sustainable future for all emerged amongst environmental activists in the early 1960s. Margolin (2007:5) indicates that these activists proclaimed that the Earth is the collective responsibility of all human beings and that everyone should be involved in combating the abuse and neglect. In 1996, Wackernagel and Rees (1996:125) warned that extensive evidence had determined that the world was in a state of "overshoot" which indicates that humanity's ecological footprint had exceeded the global carrying capacity of the Earth. The continuous warnings and scientific evidence encouraged people across the globe to embrace a paradigm shift which takes human beings from being environmentally irresponsible to environmentally responsible. Jones (2008:5) maintains that this paradigm shift is "the acceptance by the majority of people in a changed belief, attitude, or way of doing things, a fundamental change in people's worldview".

The ecological footprinting calculation estimates that South Africa's footprint is 4,02 hectares per person (South Africa, 2008:16). Footprinting is an accounting tool that measures how much biologically productive land is required to support the living standards of an individual, a city or country. The World Wildlife Fund estimates that the global fair share is 1,8 hectares per person - if everyone was to live within the carrying capacity of the planet's ecosystems. In relation to the South African value it means that the world "would need two planets if everyone lived like the average South African" (South Africa, 2008:16). The high footprinting calculation indicates that it is of importance that sustainable practices be considered and integrated at various levels and this paper describes one project that aims to contribute to a change in mind-set and thinking amongst Interior Design students. As a result, the levels of integration that are targeted with the project commence with the individual (student), then student community (class) and thereafter the external community in which the student functions. These various levels are discussed in the paper.

A personal approach towards sustainable education

Paul Murray (2011) argues that change towards a sustainable future commence with an attitude change within each individual on this planet. Murray (2011:ix) observed through his investigation in sustainability that although humanity is aware of sustainability, understands the consequences and is well informed about actions to take then – however we are not changing as people. The author included his personal attitude and approach in his observation. Through introspection the author discovered that as an academic, he approached sustainability as a 'professional issue' and his professional experience has barely influenced his personal choice and practices. This realisation had a profound impact on his research focus and through a United Kingdom (UK) funding initiative he developed, over a period of five years, teaching, learning and training techniques that could engage people at a personal level with what he refers to as "the biggest issue of our time" (Murray 2011:x).

This author and curriculum developer encourages individuals to think and reflect deeply on the role that we as individuals should perform in the sustainability agenda. He disagrees with the general focus in society that requests humanity to save the planet, in his opinion this is the wrong message. Murray (2011:1) states firmly "[I]t is not the world that needs saving but us;...to save ourselves we need to embrace fundamental change." In his opinion human behaviour change starts with the individual and our focus and expectations should not only be invested in institutions, business or governments. Murray (2011:22-23) therefore promotes six attributes or qualities that could assist individuals to move towards a sustainable self. These are: awareness, motivation, empowerment, knowledge, skilful means and practice and are presented in Figure 1 below.

Figure 1: The six attributes for sustainable living (Murray 2011:23)

Murray (2011:22) acknowledges that it is not possible to accept new ways of thinking suddenly, but "they can be cultivated over time if we engage constructively with our internal drivers and mental capabilities". The role of the educator, facilitating the sustainability teaching and learning process, is therefore not only to present knowledge and develop skills that could inform sustainable practices. A deeper level of approach is required that include; promoting awareness, motivating a deep intention to act sustainably, foster empowering beliefs and promote wise application of knowledge and skill. Murray (2011) explains that this can only be achieved if students recognize the connections between their core values and sustainable behaviour which in turn create conscious awareness on altering our automatic responses and behaviour. Once students transform their self-limiting beliefs they will be empowered to override internal barriers to change. In order to obtain deeper levels of learning and change at an individual level it is therefore argued in this paper that it is essential to employ a

teaching and learning strategy that will assist the student to experience personal growth and possible change whilst also cultivating sustainable thinking. The student-centered learning approach was identified as a suitable strategy and a brief overview is presented of this approach.

Employing a student-centered approach

A student-centred teaching and learning paradigm

Roberto Di Napoli (2004) developed an education guide for the University of Westminster in which he explains the difference between the student-centered and traditional teacher-centered approaches. Di Napoli (2004:2) explains that in the traditional teacher-centered approach the teacher serves as the centre of knowledge and therefore controls the student's access to information. Students are presented with abstract facts or concepts, figures and formulas that are memorised and assessed through conducting exams. Information and data is presented primarily by the teacher and this approach seldom presents the opportunity for students to translate information into knowledge or include personal development in the learning approach.

Di Nappoli (2004: 3) explains that the role of the teacher changes in the student-centered approach, since the teacher acts as a facilitator and his/her role is to assist the student in accessing and processing information. The student has access to multiple sources of information (e.g. online databases and community members) and they solve problem/tasks by utilising these resources. The student-centered syllabi is not only constructed around facts but presents students with the opportunity to engage in the process of learning and therefore construct meaning through talking, listening, writing, reading and reflecting on themes, concept, ideas and issues. Group work and group interaction therefore becomes an important component in the teaching and learning approach.

Bonk and Cunningham (1998:28) however also acknowledge the impact of technology in the introduction of alternative teaching and learning approaches. These authors explain that technology has become increasing interactive whilst the cost of internet connection is rapidly declining, making it affordable for students to have easy access to complex information networks. Bonk and Cunnigham (1998:26) identify that "vast resources at our fingertips are restructuring the way we humans work, live, learn, and generally interact". It is therefore impossible to ignore the technological changes and the influence that these changes have on teaching and learning processes and learning environments. Bonk and Cunnigham, 1998:28 explain that the traditional teacher-centered model is influenced by the technological changes and alternative models of instruction, such as the student-centered, constructivist and sociocultural approaches are required to accommodate the changing learning environment. These authors further indicate that the teaching and learning challenges that are associated with individual rather than group development could be addressed through the student-centered approach. It could enable educators to incorporate and accommodate the student's linguistic, cultural and social backgrounds in the teaching and learning process.

Student centered learning: class sessions and group project

In this section of the paper a thorough explanation is presented of the third year project that employs a student-centered learning approach. The student centered learning approach does not only aim to facilitate learning but also to encourage personal and group development as already explained in this paper. The project is developed to address one aspect of sustainable design which is, recycling. The concept of sustainability is introduced to the students through using a combination of contact sessions (almost six hours), execution of the group recycling audit project as well as a class presentation.

Class contact sessions

The principles, theories and concepts that relate to sustainability are introduced to students during class sessions. A PowerPoint presentation is used to guide the class discussion. The visual presentation includes images, graphs and statistic that are relevant to the topic. It is important for me, as the facilitator of this teaching and learning process, to focus on the following topics rather than overemphasise definitions and principles;

- Inform students of the dilemma of the worldwide sustainability problem without placing overt attention on doomsday and end-of-the-world theories.
- Discuss the concept of sustainable responsibility and present practical examples that explain the everyday contributions of individuals in society.
- Introduce the concept of "overshoot" and discuss South Africa's ecological footprinting in relation to countries such as America, India and Denmark.
- Explain the concept "green at heart" and show examples of "Green at Heart" initiatives that are available in South Africa.
- Discuss the role of the Green Building Council of South Africa and the Green Star evaluation framework.

The contact sessions employ the student-centred teaching and learning process and aim to elicit interest in the topic and determine the student's general knowledge and understanding sustainability. As the facilitator, I present questions to the students and I guide the discussion through reflecting on answers provided by the students. The discussion commences with questions such as:

- Do you think that human beings have a negative impact on the planet?
- Why do scientists predict that we will experience drastic global warming?
- Who are the people that can make a contribution to a sustainable future?

The discussion is guided by presenting images that show the students the impact of global warming, the overshoot statistics of different countries and positive outcomes of intervention employed by sustainable thinkers.

Recycling audit project

The Recycling Audit project is a group project and enables students to gain first-hand experience in employing basic quantitative and qualitative research techniques, whilst conducting an audit of a recycling station located on the university campus. The execution of the project takes place over a six week period and the class session are offered parallel to the execution of the project. Students are divided in groups of their choice and are requested to identify a group leader in each group.

The project presents the students the opportunity to observe their immediate environment and continue their learning experience through reflecting on their campus environment. The facilitator allocates a recycling station to each group and presents the project expectations and outcome in a written brief that is discussed during the class sessions. The students are required to document the usage of the recycling station daily at two hour intervals over a five day period between 08h00 to 16h00. The groups monitor the type of waste that is recycled, peak recycling periods, bin cleaning periods and any behavioural patterns of people using the recycling station.

In addition to the audit, each group member conducts an open-ended interview with a student that uses the identified recycling station. The interview process adheres to ethical requirements and all participants sign an informant's consent form prior to the interview. The projects brief further requires of students to investigate

questions relating to sustainability. These questions focus on the theory and principles of sustainability, advantages of recycling and a critical review of the sustainability situation in South Africa. The final report therefore comprises; the consolidated audit results, audit observations sheets, completed interviews sheets, informant's consent forms and an investigation into the theoretical component.

Students' project feedback

The outcomes of a qualitative questionnaire, which aimed to obtain project feedback from the students, resulted in the formulation of the findings as well as Table 1 and 2, presented in this paper.

The questionnaire was presented to 11 students that participated in the Recycling Audit project in 2012 and 23 students in 2013. Student participation, calculated over a two year period, is as follows;

- Class of 2013 - 25 students out of a class of 30 students (83 per cent completed a questionnaire)
- Class of 2012 - 11 students out of a class of 23 students (48 per cent completed a questionnaire)

The findings therefore reflect the opinion of 68% of students that took part in the project over a two year period.

Personal value of the project

Three themes were explored in the questionnaire and each theme was presented in a separate question. The first question asked students if the project was of personal value to them. The majority of students (89%) answered yes to this question. The main aim of the questionnaire was to identify if the project assisted students in transforming their thinking and approach towards sustainability. Paul Murray's (2011) six attributes were used as a reference to match the answers provided by students with the attributes that move individuals towards a conscious sustainable self. Table 1 below, lists the categories that were identified in the first question as well as the number of observations identified in each category;

Table 1: Student feedback identifying the value of the project

Feedback categories explaining the value of the project	Number of observations
Made me more aware of recycling/sustainability/environment	12
Became more aware of the actions of people around me	8
Gained knowledge about the sustainability	3
Learnt more about recycling and/or importance thereof	11
Sparked interest to take action	1
Important to teach other people about recycling/sustainability	2
Showed me how I/community can change to make a contribution/difference	4
Motivated me to change my behavior/ contribute to a sustainable future	2
Enabled me to put into practice what I learnt	3

Table 1 shows that the students' feedback presented a wide range of answers that ranged from gaining awareness of the sustainability problem to the need to take action and contribute to solving the problem. The majority of students identified that the project increased their awareness of sustainability, recycling, their immediate environment and also the impact of the actions of people around them. The second highest observation count indicated that students gained knowledge of sustainability, recycling and the importance of recycling. The project therefore contributed mostly towards two attributes; awareness and knowledge. The

remaining four attributes, motivation, practice, empowerment and skilful means, were evident - but to a far lesser degree than the first two attributes.

Four students (11 per cent) did not consider the project of any value. One of the four students considered it as unnecessary to take part in recycling; “People at the dump sorts the rubbish and makes money of it” (Respondent 35). Another student explains that her behaviour remained unchanged “My schedule/pattern did not change much prior and after the assignment” (Respondent 11).

Cultivating change in behaviour

The second question aimed to focus on the individual’s ability to change or incorporate a new approach towards sustainability in their everyday existence as an individual and/or as a member of a community. Four questions were presented to the students and the outcome is presented in Table 2.

Table 2: Personal behavioural change in recycling patterns

	Questions relating to change in recycling behaviour	**Yes**	**No**
1	Did you recycle waste at home prior to the execution of the project?	44%	56%
2	If you answered NO in previous question, did you start to recycle waste after you completed the project?	65%	35%
3	Did you share the importance of recycling waste with family/friends or fellow students after you completed the project?	81%	19%
4	Did the project encourage you to improve your contributions to a sustainable future?	100%	0%

Table 2 indicates that less than 56 per cent of the students did not recycle waste at home and that the project encouraged a change in recycling behavior for 65% of these students. A surprising finding identified through the feedback was that 81% shared the importance of recycling waste with their family or friends and the project encouraged all the participants to improve their contributions to a sustainable future. The following responses describe some of the actions and contributions that were identified in the questionnaires;

> “I am becoming more actively involved in recycling initiatives after the audit” (Respondent 17).
>
> “I have applied principles of sustainability in my own home and started researching more about how I can integrate it further into my design” (Respondent 11).
>
> “I am more willing to go out of my way to throw rubbish in the correct recycling bin, especially at varsity because many recycling bins are available. Before I would just throw it in the general bin” (Respondent 22).
>
> “[T]he project showed me that the little contribution that I can make actually plays a huge role in preserving our planet” (Respondent 7).

Project improvement suggestions

The third question requested students to present recommendations in relation to the Recycling Audit project. An important and valuable suggestion was presented by Respondent 4. This student suggested that the word “waste” should be changed to “recycling material”, because the word has an incorrect connotation and refers to material that is not of value. The student explained that “everything disposed can contribute to a new product” (Respondent 4). The knowledge and insight that was gained from the project provided this student with insight to critically reflect at a deeper meaningful level. This observation addresses the core of the waste recycling problem and shift in thinking paradigm required to incorporate sustainable practices. In addition, this student also presented the following question “Why do we still have general waste?” This observation

identifies that the student fully grasps the concept of recycling and considers a general waste bin on campus to defy the objectives of recycling stations on campus.
A number of students emphasized the value of the understanding and awareness that they gained into recycling and consider it of importance to share the project with the wider student community. The following statements explain these recommendations;

> "Incorporate a recycling project across the university during Green Week" (Respondent 12).
> "More people (students) should be made aware of the recycling bins. I did not use them before this project because I was unaware of their particular use" (Respondent 21).
> "The project needs to be introduced at first year level to create more awareness and therefore greater contribution from students" (Respondent 20).
> "Make other students more aware of recycling and the impact they can make" (Respondent 25).

Conclusion

The paper acknowledges the importance of the sustainability agenda in design education and explains how the topic is introduced an Interior Design project. The sustainability agenda requires of people to adapt to new ways of thinking and embrace personal change. The research and curriculum development work conducted by Paul Murray (2011) explains that human beings do not accept change easily, but that it is possible to cultivate change over time and therefore accept new way of thinking and approaches. Murray indicates that it is the role of the educator to assist students in cultivating sustainable thinking and motivate students to act sustainably. In order to cultivate this change in students, the paper explores the application of a student-centered learning approach and describes the manner in which the teaching and learning process assisted in promoting awareness amongst students and motivated them to alter their behaviour and become self-motivated responsible designers.

The student-centered learning and teaching process aimed to present the student with the opportunity to engage with the topic through both personal and group experiences. The students obtained personal insight in the recycling practices of the student community through observing their daily recycling habits. They conducted individual interviews with students and discussed the observations and findings in groups. The theory and principles of sustainability as well as the immediate sustainability challenges that South Africa face, were explored by the students through using on-line data-bases and accessing published literature. The lecturer facilitated the process and assisted the students in monitoring the time management of the project, interpretation of findings and final execution and presentation of the group project.

The feedback presented by students gives valuable insight into the personal value that they gained through their engagement with the topic during class sessions and execution of a Recycling Audit group project. The findings of a qualitative questionnaire indicated that the teaching and learning process increased the students' awareness of sustainability and recycling, they gained knowledge and it motivated them to change and include sustainable practices in their daily life and design practices. The student feedback indicates that all the students were encouraged by the project to improve their personal contributions towards a sustainable future. A surprising finding revealed that 81 per cent shared the importance of recycling waste with their family or friends and 56 per cent of students, who did not recycle waste prior to the project, commenced to recycle waste.

The teaching and learning process described in the paper, is considered to be not only of value for the students but also presented valuable insight to the facilitator. It was possible to employ the students-centered teaching and learning approach in the context described, because the class sizes were small which made it possibly for students to discuss, interact and debate issues in class. The students were at a third year level of study and already gained fundamental knowledge and exposure towards the topic in previous study levels

which enabled a more focused and informed discussion in class. These factors played an important part in facilitating the teaching and learning process because a deeper level of thinking and debate was reached in a short period of time which assisted in shifting awareness and encourage motivation into the topic. It is observed that the outcome of the projects could have been very different if the students were at a first or second year level, if the class sizes increased above 35 and if the students were not familiar with the context and the individuals in their group. The project was therefore executed in a familiar teaching and learning context and environment. Overall the project is considered as a success and students presented positive and encouraging feedback.

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DESIGNING ENVIRONMENTS FOR A STRESSFUL AND TRAUMATIC WORKPLACE CULTURE: A CASE STUDY IN A MENTAL INSTITUTION

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Abstract

The mental and physical working context in which mental health-care providers spend most of their day is an extremely stressful environment, specifically with regards to mental and physical well-being. This environment is shaped by a number of influences such as job demands, patient related stresses and political and economic pressures. All of these factors may eventually result in high levels of staff burnout, decreased work efficacy and increased overall stress. The primary objective of this study was to facilitate wellness enhancement amongst mental health-care providers in a psychiatric hospital by manipulating the visual lived environment through the introduction of colour landscape photographs with an emphasis on physical positioning and content. However, this article interrogates specifically the photographic choices and response to them in the selected environment. A qualitative analysis focussed on positioning with written participant feedback, indicating that 'the photos add new dimension and depth to the ward' and 'loved the photo's in the passage by the entrance of the ward'. A Likert scale survey questionnaire was used to assess feedback with regards content. A quantitative analysis of the survey results indicated an overall improved photographic image and placement perceptual preference within the lived environment. Measured experiences under the headings of 'don't like', 'acceptable' and 'like a lot' have increased between the two installations for the following content categories: 'veldt and trees' +2%, 'autumn' +13% and 'colourful flowers' +4%. A 'waterfalls' category was introduced in the second installation with a 'like' score of 82%. The 'leaves and autumn' category remained the same, with 'trees and desert' scoring lower in the second iteration by 10% and 14% respectively.
***Keywords**: stressful workplace, burnout, colour landscape photographs, wellness*

Introduction

"Nature has been recognized as a source for healing throughout history. In ancient times, healing rituals were conducted in sacred spaces defined by the awe-inspiring nature" (Guenther & Vittori 2008:78). However, the development of anaesthesia, surgical techniques and medical treatment began to separate the late nineteenth-century hospital from its early beginnings as primarily a place to recuperate. Nevertheless, resort spas, tuberculosis sanatoriums and residential psychiatric facilities maintained a focus on the healing aspects of the landscape while the twentieth-century hospital followed the broader quest of mastery over nature (Guenther & Vittori 2008:79). Hospitals concentrated on medical training and education as well as technology whilst the resort spa movement in Europe and the United States continued to focus on nature as a therapeutic procedure. These two approaches worked to manifest the notion that 'healing' is not, as would normally or generally be assumed, only a physical process, but that psychological healing also comes into play as part of the bigger 'healing' idea. This resonates with World Health Organization's definition of health, which states: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This modality emerged as a way to reconnect stressed individuals to their bodies and their health. During urban epidemics, the wealthy routinely retreated to the refuge of the resort spa (Guenther & Vittori 2008:84).

A body of research became apparent during the 1980's demonstrating that an association with nature encouragingly influences medical outcomes and medical staff performance (Guenther & Vittori 2008:84). Because of that research, the role of the healthcare environment in the healing process was promoted. This was supported by the concern among health care providers, environmental psychologists, consultants and architects (Devlin 1992 and Martin Hunt & Conrad 1990) as a result of the belief that the traditional, institutionally designed health care facility apparently had very little bearing on the wellness of its patients even if the level of care is superb (Ulrich 1992:20-25, 1995:88-104).

The mental and physical working context in which mental health-care providers spend their day is an extremely stressful environment, specifically with regards to mental and physical well-being (Evans et al. 2006:75-80). This environment is shaped by influences such as job demands, patient related stresses, political and economic pressures and potentially life-threatening situations where at times a seeming hopelessness in the treatment effectiveness, all contribute to what much research on the topic of staff burnout has indicated. This coincides with a decrease in work efficacy, an increase in overall stress and many other similar and relevant conditions (Naudé & Rothmann 2006:63-81). These factors may result in high levels of staff burnout, decreased work efficacy and increased overall stress. In South Africa, the medical profession is under severe strain (stress) and newspapers articulate those common concerns. Dr Lucas Ntyintyane (PhD), a South African trained physician, writes in an article in the *Sunday Times Newspaper* (2009), that, amongst many other reasons, it seems that "poor working conditions [working environment] is the main reason for South African doctors wanting to leave the country" (brackets added). Another article in the *Sunday Times Newspaper* (2010), by Zine George about the Tower Psychiatric Hospital in Fort Beaufort in the Eastern Cape, says "this hospital is simply unbearable", citing 64% of nursing posts unfilled and only one full-time doctor in a 400-bed institution for the mentally ill. Stoyanov's (2011) Masters' research in Clinical Psychology reports on South African medical practitioners' mostly negative experience of the current health-care delivery system, by highlighting the mass departure of valuable human resources, medical practitioners becoming progressively more frustrated with governmental policy, wage negotiations, work-place disenchantment, lack of service delivery, expressions of corruptions, and lack of resources. This confirms the notion that "the lived, work environment" of medical practitioners is paramount for the optimal functioning of the health care professionals as well as for the optimal administering of health care as a whole.

The primary objective of this study was to facilitate wellness amongst mental health-care providers in a psychiatric hospital by manipulating the visual lived environment through the introduction of colour landscape photographs with an emphasis on the physical positioning and content of the photographs.

Kellert and Heerwagen (2008:85) are of the opinion that:

> "Nature nurtures. There is no longer any doubt about the therapeutic value of contact with the natural environment, whether it is through window views, gardening, walking through the woods, or watching the sun set over the ocean. Positive benefits occur even through simulations of nature such as in posters and photographs."

Research in a variety of fields and applications has indicated that contact with nature produces emotional, physiological, social and cognitive benefits in a wide array of contexts. The most undeviating findings across studies, regardless of whether they are controlled experiments or field applications, are mood improvement and stress reduction related to contact with nature. The contact can be multisensory active engagement or purely visual and passive such as viewing only. A further research project was conducted where 125 staff and

125 inpatients of physical medicine and rehabilitation units viewed 64 photographs that depicted similar such units from 11 hospitals. The mostly favoured photographs were of trees and lawn. Furthermore, in research undertaken by Ulrich, open-heart surgery patients were postoperatively exposed to different scenes: a nature scene of water or trees, or no scene at all. Those who viewed the nature scene of water reported less anxiety than did those exposed to the other types of scene or no scene at all.

Ornstein and Sobel, (1990) "Flooding our brains with rich natural visual stimulation helps us recover from surgery, tolerate pain, manage stress, and attain well-being." They also state that, "Pictures of ponds, streams, trees and other vegetation produce lower levels of arousal and higher alpha brain waves, a brain state associated with wakeful relaxation." Literature thus suggests that colour photographs that show nature do seem to have a positive effect with regards to the well being of the people that are viewing those visuals. This research sets out to interrogate "How one can establish an enhanced sense/state of wellbeing and efficacy amongst mental health-care providers in a psychiatric hospital by manipulating the visual lived environment through the introduction of colour landscape photographs?"

Methods

Short Introduction

This research followed an Action Research model. A situational analysis was undertaken to explore the state of wellbeing of the health-care workers and the lived environment (the psychiatric ward). An informal evaluation of the physical ambiance in the Psychiatric unit by the researcher indicated that the partially bare walls throughout the unit might be an important contributory factor in the staff members' burnout experiences.

This was followed by the creation, development and installation of an enhanced lived environment. The researcher developed the first intervention model, using his tacit knowledge as photographer, relying on his training as commercial photographer and his background as an academic. He also integrated knowledge from his Masters degree (……., 2004), where he researched the prevalence of aesthetic and serenity characteristics in certain types of landscape-, seascape- or cityscape photography.

After a period of 3 months, the reactions to the enhanced lived environment were assessed. These assessments lead to a redesign of the lived environment, according to the results of the assessment. After a period of 3 months, again, the reactions to the differently enhanced lived environment were assessed.

A mixed method approach was utilised whereby firstly, qualitative, semi-structured face-to-face interviews were used to present the situation analysis by exploring the lived experiences of the mental health-care workers by means of open-ended questions. A phenomenological approach was used to provide and establish a base-line, pre-intervention context. Secondly, most of the creative intervention work was based on the tacit knowledge and expertise of the researcher. Thirdly, the quantitative component involved the use of one self-developed questionnaire and two standard questionnaires. The two standard questionnaires were the *Profile of Mood States* survey (POMS) (Morfeld et al 2007:1-9) and the *Work Environment Scale* survey (WES) by Moos & Insel (www.mindgarden.com/products/wes.htm), while the *Wellness Questionnaire* was self-developed. The POMS and WES questionnaires were used to establish overall responses towards the workers' lived work environment, whilst interviews were used to establish base-line pre-intervention context, exploring the lived experience of the staff working in Ward 1 of the selected hospital. The *Wellness Questionnaire* was developed to provide written feedback with regards the photographic interventions that were introduced into the ward.

Leedy and Ormrod (2001:4) state: "Research is the systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or

interested." In this instance, the focus is on formal research where the intentional aim is to enhance the understanding of a phenomenon (Leedy & Ormrod 2001:4). Quantitative and Qualitative research approaches are seen as the two recognised forms, in the broader sense, and within the medical environment, the quantitative approach has been applied quite extensively. "Quantitative research" is the procedure whereby questions are answered about "relationships among measured variables with the purpose of explaining, predicting, and controlling phenomena" (Leedy & Ormrod 2001:101). In this study the use of the POMS and WES questionnaires and the statistical analysis that followed constitute the quantitative research component. A Likert scale survey questionnaire was used to assess feedback with regards the content.

Qualitative research, in contrast, deals with answering questions "about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena from the participant's point of view" (Leedy & Ormrod 2001:101). The qualitative research paradigm, in its broadest application, refers to "research that elicits participant accounts of meaning, experience or perceptions" (Fouché & Delport 2004:79). Fouché and Delport (2004:79) add that in essence, the qualitative researcher is concerned with "understanding (*verstehen*) rather than explanation; naturalistic observation rather than controlled measurement"; and the subjective investigation of reality from the perception of an insider rather than an outsider perspective that is principally experienced in the quantitative paradigm. All qualitative approaches have two things in common: firstly, the focus is on phenomena that occur in natural settings, that is, in the "real world," and secondly, the research involves studying those phenomena in all their complexity (Leedy & Ormrod 2001:147). Fouché and Delport (2004:79) also state that it is "holistic in nature and aims to mainly understand social life and the meaning people attach to everyday life." Qualitative researchers seldom try to simplify what is observed but rather try to portray the issue in its multi-faceted form (Leedy & Ormrod 2001:147). Such a multi-faceted approach relies on a 'thick description' of the lived environment to facilitate and support the transferability of the findings of the research. A qualitative analysis focussed on the positioning of the photographs within the ward, supported with written participant feedback.

Results

The first discussion point is 'Content' and the feedback was obtained by means of a Likert scale survey questionnaire. The scale ranged from one (1) to ten (10), and the three headings to choose from were 'dislike', 'acceptable' and 'strong preference'. The two values shown within each Likert heading in the Tables below, as assigned to *colourful flowers,* for example, indicate the first and second iteration responses respectively. Figure 1 shows two examples of what some of the photographs of colourful flowers looked like: the photographs shown are only two of a number of images in the respective categories and resemble the spectrum of images that were displayed. Table 1 shows the first and second iterative results. The quantitative analysis of the survey results indicate the following:

Figure 1

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
COLOURFUL FLOWERS	16%	6%	21%	28%	63%	67%

Table 1

The first iteration responses indicate that 16% of the respondents disliked the 'colourful flowers' photographs, 21% found them to be acceptable and 63% of the respondents experienced a strong preference towards the photographs that displayed colourful flowers. The second iteration responses differed slightly and only 6% of the respondents disliked the photographs. Under 'acceptable', 28% of the respondents found favour and 67% of the respondents experienced a 'strong preference', indicating a +4% increase.

Figure 2

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
LEAVES/AUTUMN	18%	12%	24%	29%	59%	59%

Table 2

Table 2 indicates 6% fewer respondents disliking the 'leaves/autumn' photographs (figure 2) in the second iteration, with 5% more of the respondents deciding on 'acceptable' during the second iteration. A 59% 'strong preference' for both of the iterations was shown.

Figure 3

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
WATER	-	6%	18%	12%	82%	82%

Table 3

With regards to the 'water' photographs (figure 3), 6% of the respondents reacted with a 'dislike' in the second iteration. The result of that response is seen in the 18% versus 12% in the 'acceptable' headings. Eighty two percent (82%) of the respondents reacted quite favourably for both of the iterations in the 'strong preference' heading (Table 3).


Figure 4

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
VELD and TREES	13%	11%	6%	6%	81%	83%

Table 4

The 'dislike' heading showed minimal change in the veldt and trees category (Figure 4), with 'acceptable' remaining the same. A 2% increase was experienced under the 'strong preference' heading in the second iteration, as shown in Table 4.


Figure 5

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
TREES	6%	-	6%	22%	88%	78%

Table 5

During the second iteration, 16% more respondents found the 'trees' (Figure 5) to be 'acceptable', but the 'strong preference' group scored lower by 10% (Table 5).


Figure 6

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
DESERT	29%	33%	24%	55%	47%	33%

Table 6

In the 'desert' category (Figure 6), the scores were quite evenly spread amongst all three headings, with a 14% decline during the second iteration under the 'strong preference' heading' (Table 6).

Figure 7

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
AUTUMN	24%	6%	18%	22%	59%	72%

Table 7

The 'autumn' category (Figure 7) shows an 18% decrease under the 'dislike' heading with the second iteration and a 13% increase under the 'strong preference' heading, as shown in Table 7.

Figure 8

	DISLIKE		ACCEPTABLE		STRONG PREFERENCE	
EXPERIENCE OF CONTENT	1-4		5-6		7-10	
WATERFALLS	-	-	-	18%	-	82%

Table 8

A ‘waterfalls’ category (Figure 8) was introduced in the second iteration with a ‘strong preference’ score of 82% (Table 8).

The next combined table (Table 9) shows all the categories, with the highest scoring content at the top (veldt and trees) and the lowest scoring content at the bottom (desert). The first and second iteration scores are listed again in order to compare all the categories and scores.

Experience of content	**DISLIKE**		**ACCEPTABLE**		**STRONG PREFERENCE**	
	1-4		5-6		7-10	
VELDT & TREES	13%	**11%**	6%	**6%**	81%	**83%**
WATER	-	**6%**	18%	**12%**	82%	**82%**
WATERFALLS	-	**-**	-	**18%**	-	**82%**
TREES	6%	**-**	6%	**22%**	88%	**78%**
AUTUMN	24%	**6%**	18%	**22%**	59%	**72%**
COLOURFUL FLOWERS	16%	**6%**	21%	**28%**	63%	**67%**
LEAVES/AUTUMN	18%	**12%**	24%	**29%**	59%	**59%**
DESERT	29%	**33%**	24%	**33%**	47%	**33%**

Table 9

In conclusion it can be argued that the results of the research are consistent with what the literature suggests. Verderber (1986:450-466) argues the “the mostly favoured photographs were of trees and lawn”. The results show an 83% and 78% *strong preference* towards trees. Ulrich, quoted by (Blumberg & Devlin (2006)), states that a nature scene of trees or water, viewed by open-heart surgery patients, reported less anxiety than did those exposed to the other types of scene or no scene at all. The results show an 83%, 82% and 78% *strong preference* towards trees and water. Sobel, quoted by (Huelat 2003:164), states that, “Pictures of ponds, streams, trees and other vegetation produce lower levels of arousal and higher alpha brain waves, a brain state associated with wakeful relaxation.” ‘Trees’ score an 83% *strong preference* whilst the water and waterfalls category also scored quite high.

The second discussion point is ‘Positioning’. Factors such as the physical size of the photographs, the content (subject matter) and presentation mode (wall paper, block mounts, box mounts, stretched canvasses and laminated photographs), availability to available light and artificial light, the ambulatory patterns of the staff and the purpose of the venues, all played a role in terms of the decision-making surrounding the positioning of the photographs. Three questions were posed: a) Are you happy with the physical positioning of the photographs in the ward? b) Which ones would you liked moved, and to where and c) which ones are placed ‘just right’ and why do you think so? The written responses formed part of the qualitative analysis. The

following two images (Figures 9 and 10) articulate the responses and refer to a specific image that was situated in the 'wrong' position. The respondents also referred to the impact that the photograph has on their morale.


Figures 9 & 10

The following comments are verbatim extracts from the respondents:

'Some at the back areas of the ward may be moved to the front'. This comment refers, as mentioned, to the photograph in Figure 9, which was then moved to the reception area. *'This image gives structure to waiting area – offers "safety" feeling'* and *'Just fits perfectly there, gives idea of open spaces'* and *'because when you enter the ward they uplift your mood'.*

The next photograph (Figure 12) received a fair number of comments as well.


Figures 11 & 12

Figure 11 shows what the passage area looked like before the intervention. The passage was sparsely decorated with two tapestries on the left and a framed picture on the right (Figure 11). The following comments are verbatim extracts from the respondents:

'The one at entrance passage. *They give a ward a lively appearance, you will feel you are entering a park, not a ward'* and *'Especially the wall papers, gives the entrance a nice view'* and *'Resembles walking into the ward through forest of trees – welcoming effect'*.

The next photograph of the sunflowers was placed in the boardroom. The entire staff congregates here every Monday morning and a number of scheduled meetings take place with the treatment staff and patients, during the week. Figure 13 shows the venue before the intervention and Figure 14, after.


Figures 13 & 14

This comment is a verbatim extract from one respondent: *'It was placed right because it shows life, love and keeps the place bright.'*

The following random comments were also made: *'The photos add new dimension and depth to ward!', 'Personally I really like all the photo's, especially the sunflowers. I would really like to move it to my office', 'Shape of photograph/frame suits wall and provides good focal points', 'Photo's excellently placed – add depth and extra dimension and colour to ward'* and *Colourful, highlights … 'happy colourful atmosphere'.*

In the *Journal of Alternative and Complementary Medicine*, Schweitzer, Gilpin and Frampton (2004) share the opinion that the "ambiance" of a space has an effect on the people that use the space. They elaborate on the idea that the physical environment, while being a dimension of healing in its own right, is intertwined with many of the other dimensions of a healing environment. The healing environment may make an "impact on health by influencing the behaviours, actions and interactions of patients and their families as well as the staff members who provide the care."

Conclusion

As mentioned earlier on, the primary objective of this study, in short, was to facilitate wellness amongst mental health-care providers by the introduction of colour landscape photographs. In conclusion it can be argued that the *content* of the colour landscape photographs do play a role in fostering a like or dislike of the photographs within these specific circumstances. Table 9 is a clear indication of the specific type of content that resonates, or not, with the specific group of people that were tested here. The *positioning* of these specific photographs, with *inter alia* also the factors such as the physical size of the photographs, the content and presentation mode, availability to available light and artificial light, the ambulatory patters of the staff and the purpose of the venues, all played a role in terms of the successful functioning of the colour landscape photographs. The comments reflect that a certain amount of success has been achieved in attaining the correct positioning of the photographs within the ward. Both the quantitative scores and the qualitative feedback respectively for *content* and *positioning* are supported by various studies that found that the physical ambiance in hospital settings contribute significantly to the mood state (wellness) of staff members and/or patients (brackets added) (Schweitzer, Gilpin and Frampton 2004). To this end, forty-five colour landscape photographs were donated to the psychiatric ward, with the hope for a continued enhanced sense/state of wellbeing and efficacy.

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CRITICAL DESIGN AS CRITIQUE OF THE DESIGN STATUS QUO

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Abstract

Contemporary design practice (and theory) is growing up. There is evidence to support the emergence of a new breed of designer who is able to reflect on her or his role in society, and to be critical of what they make and what the resultant consequences of that may be. Design is often used as a vehicle to criticise and comment on issues, highlight problems and shortcomings in society, and present views and perspectives. This suggests that design is at a distance and impartial, but the truth is otherwise. Design is ideological and an expression of the values mediated by the designer and commissioned by others. This is the status quo: affirmative design. When design steps away from this position and critiques itself, critical design is the result. Presenting alternative perspectives and reflecting on the role of design is its purpose. This paper will address this emerging phenomenon that originated in product design, and the discourse extant to the work of Dunne and Raby. By identifying the characteristics of critical design and visualising the pathways, processes and consequences that distinguish it from affirmative design, the paper will argue that design practices, other than product design, can be scrutinised according to this model. Furthermore the virtues of the designer's authorial voice will be extolled as reflexive of this and necessary to establishing a culture of design critique, and to positioning critical design as an integral, important and necessary part of design discourse.

***Keywords**:* critical design, affirmative design, design critique, design authorship, design discourse

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Introduction

Design occupies a position of ambivalence, bestriding the concerns of capital and culture (Hill in Mazé and Redström 2007:1). This uncertainty about the role of design within society has resulted in several attempts to define the borders of the practice with many designers holding to the belief that design is much more than merely a professional practice: it is a fundamental human activity. "Outside of nature, [designers] are the prime creators of…experienced reality", according to Harold Nelson and Erik Stolterman (2012:11), and the "ability to design…determines our humanness". More than twenty years ago Victor Margolin (1989:28) stated it thus: "Design is as much expression of feeling as an articulation of reason; it is an art as well as a science, a process and a product, an assertion of disorder and a display of order". Social values and theories about how the 'world works' are intrinsic to the products of design. They are "representation[s] of arguments of how life should be lived" (Margolin 1989:28) communicated through design and are a manifestation of the social role of design. Design rhetoric has "directly influenced the actions of individuals and communities, changed attitudes and values, and shaped society in surprisingly fundamental ways" (Buchanan 1989:93).

There is criticism (implied as a form of "being against") of the ambivalent role adopted by design (referred to by Hill in Mazé and Redström 2007:1), and calls for it to become more socially proactive. According to Poynor (2004:1) this negative view of design's ambivalence does not lead to social transformation. What is needed is critique, as an in-depth evaluation that draws attention to, and questions the inadequacies of, society's current assumptions about design.

> [Critique] is a question of discovering what must and can change and be transformed in people's lives...It is a question of stating critically how people live, or how badly they live, or how they do not live at all. (Lefebvre 2002:18).

In the context of design, this intensity of questioning is akin to critical reflection. Here design's ambivalent position towards culture and capital requires a critique of its role within everyday life so that new possibilities for a more meaningful social role for design may be revealed. Being critical mostly exists momentarily within the studio critique or in written design discourse. Dilnot (2008:177) questions the implications of criticality in relation to design:

> But what are we to make of the critical when we deploy it as a noun? What does criticality describe? And what would it be to have the critical not just as an occasional moment, but as that which defines the very state of being of a [design] practice?

These are unpopular questions in both a professional and academic sense. Imagining the critical dimension of design is loaded with implication as it raises the question of whether design should always be bound to its traditional role as the bridge between art and capital (Gretinger in Dilnot 2008:177). Design that emerges from outside of the marketplace is treated with suspicion and regarded as "unrealistic" or "escapist" (Dunne and Raby 2001:59). The dominant stance suggests that design should deny itself any critical knowledge and should instead favour translating the tasks assigned to it by the market place – the practice of design is therefore abjured of any critical stance.
Despite this, there are a range of diverse perspectives emerging in contemporary design that run counter to traditional views on what design is and what it should be about. There are increasing examples of critical approaches in a range of different design disciplines. Many designers are attempting to use their "practices, their processes, methods, materials, products and modes of production" to contribute to the greater discourse within the discipline as a means to antagonize the prevailing conditions of design (Mazé 2009:388).

These approaches are labelled as critical design practices, located outside the conventions of accepted practice by opposing "utility, technological agenda, and financial gain" (Malpass 2009:289) and have emerged as a reaction against the "orthodoxy and protocols of [traditional] design method" (Ball and Naylor 2006:11). These practices serve as a contribution to disciplinary discourse on a meta-level, reflecting on ideological or intellectual questions within design and thereby locating the unique concerns arising from the discipline. These practices use the idea of critical thinking to ensure an understanding of a designer's own concerns about design (Bowen 2007:14). Critical thinking in design practice expands the cultural and aesthetic potential of the discipline. This kind of design is labelled as critical design and can be understood as a form of experimental design that seeks to "extend the medium … in the name of progress" and searches for new experiences through aesthetic prowess (Dunne and Raby 2001:58).

The emergence of critical design

Rather than searching for new avenues of disciplinary progress, one such form of critical design practice has materialized to focus on design's social role and has become known as critical design (Dunne and Raby 2001:58). It seeks to challenge the predominant model of production and consumption by offering alternative perspectives, exposing design's current values as unsatisfactory. Usually produced as artefacts for exhibit rather than sale or utility it is "less about problem solving and more about problem finding within disciplinary and societal discourse" (Mazé 2007:211). The opposite is affirmative design (Dunne and Raby 2001:58), leaving the predominant understanding of design unchallenged by producing products that conform to cultural, social and technical expectations. Critical design critiques affirmative design by producing products that are reified with alternative values and ideologies. These products take on the form of artefacts, prompting the reader to reflect on the alternative ideologies they have been presented with and consider them according to their own values. In this way, critical design takes a critical theory approach to design.

In presenting design as a critique of ideology, critical design focuses on the ability of criticism to manifest as design through the formulation of alternatives that question what is known about society, and in so doing, reveals alternative possibilities. The "critical" in critical design suggests its correlation to the multifaceted area of critical theory, which emerged as an alternative to 'traditional theory', as espoused by Max Horkheimer's essay, *Traditional and Critical Theory* (1972). Traditional theories of society have the objective of understanding and explaining society. By contrast, critical theory seeks to critique and challenge society as a way of bringing about social transformation. Simply stated, traditional theory focuses on understanding society, and is a form of social research that accepts the status quo. Critical theory by contrast is research that seeks to influence social change (Crotty 2003:113).

Critical theory challenges society through critique, which can be understood as an alternative interpretation of society, with the intention of "[liberating] human beings from the circumstances that enslave them" (Horkheimer 1972:244) and "emancipation and enlightenment, at making agents aware of hidden coercion, thereby freeing them from that coercion" (Geuss 1981:55). Central to critical theory is the critique of ideology, where ideology is viewed as "a particular worldview that privileges certain interests and hides this fact by making the current state of affairs appear natural" (Stahl 2008:4). Likewise, critical design's critique centres on the relationship between design and ideology, where design plays a fundamental role in the propagation of ideology. As stated by Dunne and Raby (2001:59): "Design helps to create and maintain desire for new products, ensures obsolescence, [and] encourages dissatisfaction with what we have". Here design plays an integral role in spreading capitalist values and making such an ideology seem natural. Critical design therefore questions the assumptions of the design discipline with the intention of encouraging awareness of Guess' (1981:55) hidden coercion of ideology embedded within designed products. Critical theory forms the theoretical underpinning of critical design practice, where they both aim to unmask the ideologies and the power structures at play within the practices of society and challenge what is presented as reality, thereby clearing the path for social awareness and change. Importantly, critical design does not argue for a way of designing that is free from ideological content, rather it highlights the fact that design is always ideological (Dunne 1999:30).

Imagining the implications of this theoretical position is gaining currency within design discourse. It emanates from within the field of product design and is a result of dissatisfaction with the ideological underpinnings of the current design paradigm. Critical design suggests a parallel role for design, as an experimental space, to explore the idiosyncrasies of human nature through design. It has been popularised within design discourse by the product design duo Anthony Dunne and Fiona Raby, identified by the design media as the leading proponents of this form of design. They suggest that providing a label for a specific design activity (in this instance, critical design) is "a useful way of making [the] activity more visible and subject to discussion and debate" (Dunne and Raby 2007:1).

Dunne and Raby create critically designed artefacts as an embodied critique of the relationship between product design and the propagation of consumer culture as an ideology. They use the process of designing such an artefact and its imagined use as a way to encourage critical reflection about the role of consumer products within society. Their intention is to reveal the limited user experiences offered by design's current role within society; a role that unthinkingly facilitates the dogmatic adoption of capitalist ideology. Although Dunne and Raby have been credited with popularising the term "critical design", they believe there are many others who share similar attitudes and objectives, who would not necessarily refer to their practices as critical design – designers are re-evaluating mainstream design and directing their practice towards critique and reclaiming design as a medium to invoke critical reflection (Bowen 2009:92). This represents a growing trend of designers questioning the nature of design and its current role within society and consequently the need for a deeper understanding of what constitutes this specific form of critical design practice.

Critical design is frequently misrepresented within popular writing on design. Journalists tend to be preoccupied with the novelty or the gimmick embodied by the artefacts, often ignoring the critique offered by critical design. Its influence bears witness to many designers merely imitating the offbeat aspects of critical design (Debatty 2007:3) capitalising on idiosyncratic consumer appeal. Dunne and Raby (2007:18) believe that critical design runs the risk of ending up as a sophisticated form of design entertainment with too much emphasis on the humorous aspects of the artefacts and too little emphasis on the critique. They believe this situation can be avoided by engaging with complex and challenging issues and by playing an active role within public discourse about the social, cultural and ethical impact of design within society's everyday environment.

How then can critical design be identified (and therefore practiced) and what are the processes and pathways that need to be followed to achieve this? Although critical design is presently and predominantly located within a product design paradigm, that does not preclude applying its underlying principles to 'reading' or commenting on other design forms. How can this be achieved? By determining the characteristics of critical design and affirmative design, a visualisation of the relationship between the two types of design activity is possible. Consequently, the criteria that distinguish critical design from affirmative design can be extracted and used to identify, or analyse and understand, critical design artefacts and practices, or to produce critical design artefacts.

Towards a visual definition of critical design

Figure 1 maps the characteristics of affirmative design against those of critical design. As a visual definition it effectively represents a rubric that can be used to identify the distinguishing characteristics of affirmative design and critical design. Criteria can then be extracted by which a designed artefact can be analysed to determine is affirmative/critical design credentials.

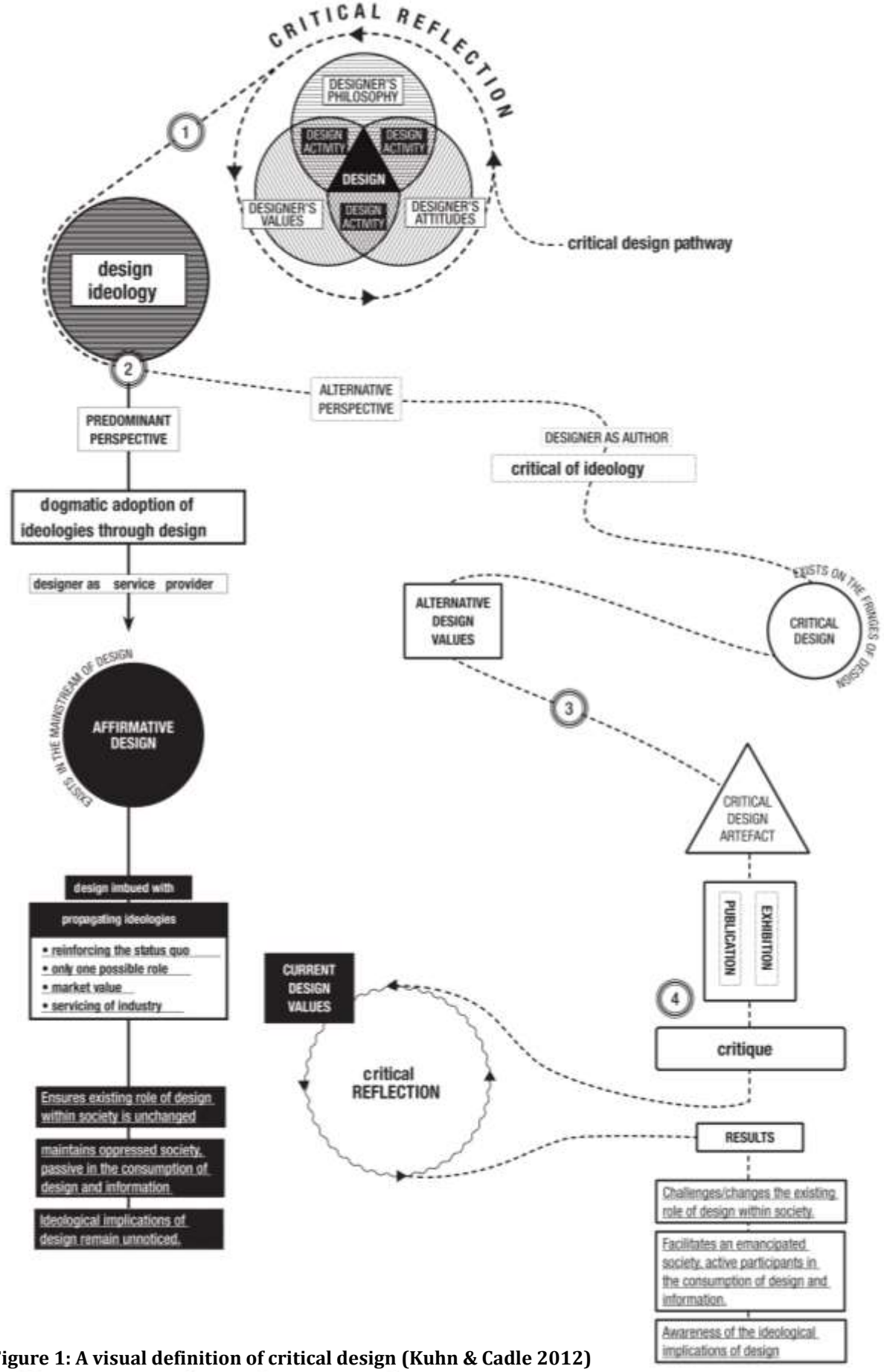

Figure 1: A visual definition of critical design (Kuhn & Cadle 2012)

Introduction to the visual definition: Critical design in brief

The pathway towards creating critical design (depicted by the dotted lines) emerges from critical reflection about the current role of design within society. It emanates from an alternative design perspective that arises from this critical reflection, which eventually reveals the latent ideological underpinnings of designing and valuing one particular way of thinking over another. This alternative perspective represents a different possibility from the current design paradigm. It is therefore critical of the ideological nature of design and suggests that the predominant perspective of design is only one possibility amongst many. The alternative design perspective offers new possibilities for design through the embodiment of alternative design values into designed artefacts. These artefacts are disseminated through exhibitions and publications where they can be interpreted by the readers (readers) as a critique of the prevailing perspective held by affirmative design. Presenting 'design as critique' encourages reflection on the ideological nature of design, which consequently reduces entrapment of users/consumers within certain ideology sets.

The key aspects that constitute the pathway towards critical design are:

1. Critical reflection: The importance of *critical reflection by the designer* and recognition of design's ideological underpinnings
2. Perspectives: An *alternative design perspective* that challenges the status quo and traditional values and positions the designer as author
3. Processes: Alternative values, combining fiction and reality, that *drive the design process*
4. Consequence: The production of *critical artefacts as conceptual models* that facilitate *critical reflection in the reader*.

The relevant numbers in parentheses correspond with these aspects on the diagram (Figure 1).

Critical reflection (1)

The central premise of affirmative design and critical design is that critical reflection on design reveals that it is an ideological activity, with designers embedding their values, attitudes and philosophy into the act of designing (Poynor 2003:120; Dunne and Raby 2001:58). However, many designers still believe that design is a neutral form of communication. Slavoj Zizek (2005:1) suggests that the current design epoch describes itself as "post-ideological" but within design lies a "disavowed ideological dimension" – the products of design embody the ideologies that create them. Even within objects that express innocuous functionality there exists a latent ideological underpinning. For instance, designers communicate meaning that exceeds the functionality of a product, implying that there is reflexivity of meaning at work; the product expresses the ideology of functionalism as its meaning rather than being purely functional (Zizek 2005:4). Unwitting coercion into the dogmatic adoption of an ideology is the result of the latency hidden within the ideological underpinnings of a designed product. Design generally facilitates a culture of consumption, and the unthinking adoption of consumerism as an ideology leads to design maintaining a society of passive consumers.

Perspectives (2)

The ideological nature of design can then be interpreted from two perspectives, either affirmative or critical of design and ideology. The former, being the predominant perspective, reinforces the current understanding of design and propagates the dogmatic adoption of the currently held design values. Here the designer's role is defined as service provider and is measured in market value. This perspective occupies a position of "market populism", a term used by the American cultural critic Thomas Frank, in *One Market Under God* (2001:XIV), to describe that which is susceptible to a market-determined consensus. It embraces the current economic and political state of affairs, the status quo as the only possible reality requiring no counter argument in the form

of criticism or dissent. This form of design is, according to Dunne and Raby (2001:58), known as “affirmative design” because it re-affirms the status quo by eschewing anything outside the market place as “escapist” or “unreal” (Dunne and Raby 2001:59).

The alternative design perspective, which is critical of design ideology, challenges the design status quo through its criticism of the values held by affirmative design. This form of design is known as “critical design”. From this perspective, the designer’s role is antithetical to the-designer-as-service-provider translating the needs of industry. This is as an effort to reclaim the intellectuality of design and to challenge affirmative design’s propagation of a society of passive consumers. Gretinger (in Dilnot 2008:178) concurs: “criticality in design…signal[s] the desire to explore other forms of practice…than those permitted by the market”. Dunne and Raby (in Freyer, Noel and Rucki 2008:265) suggest that designers acknowledge the ideological dimension of design and play the role of critically engaged “design authors”, where the designer is active in the definition of values embedded in the products of design and questions the ideologies that are rhetorically embedded in such products. Critical design transcends previous debates of design authorship, which resulted in the subjective “egomania” and self-expression related to the old-fashioned views of authorship. Those involved in this new form of design authorship stress their role as collaborators and participants in the design process as a means of circumventing the subjectivity associated with previous notions of design authorship. Critical design sees authorship as a humanising process, which serves as an advocate for idiosyncrasy in design. In a similar way to literature, authorship does not suggest that the reader adopts a passive and uncreative role in the communication process (Dunne and Raby in Freyer et al. 2008:265), rather users are encouraged to be protagonists navigating through the communications landscape.

The role of user-as-protagonist, as an active collaborator within the reading of a design, emerges as an alternative to the current understanding of users within society. This alternative view of design and society has the objective of questioning the limited range of psychological and emotional experiences offered by affirmative design, which it does by acknowledging the “complex, contradictory and even neurotic” nature of the users of design (Dunne and Raby 2007:16). The affirmative design view of society is that people are “obedient and predictable”, which in effect limits design from fully engaging with the complexities inherent in human nature.

According to Dunne and Raby (2007:8) critical design has emerged as a new form of design activity mainly because society is “incredibly complex [and our] social relations, desires, fantasies, hopes and fears” are very different from those at the beginning of the twentieth century, even as many of the ideas stemming from mainstream design have their basis in theories from that time. Affirmative design is a signifier of the failure of design to progress at the same rate as the technological, political, economic and social advancements occurring within society at the beginning of the twenty-first century (Dunne and Raby 2007:8). Challenging the status quo is one of the many ways that design is evolving in order to remain relevant to today’s society. This alternative perspective is an effort to reflect the complexities of human nature instead of depicting society as “easy to satisfy consumers” (Dunne and Raby 2010:131).

Processes (3)

An alternative view of society results in alternative values being used within the design process. Dunne and Raby’s, A Manifesto (2009), proposes these alternative (and provocative) values (Figure 2). Column “a” represents the values currently held by design and can be understood as affirmative design values. Column “b” lists the alternative values held by critical design. The affirmative design values presented in column “a” reflect the predominant understanding of design, while the critical design values depicted in column “b” reflect new possibilities for design.

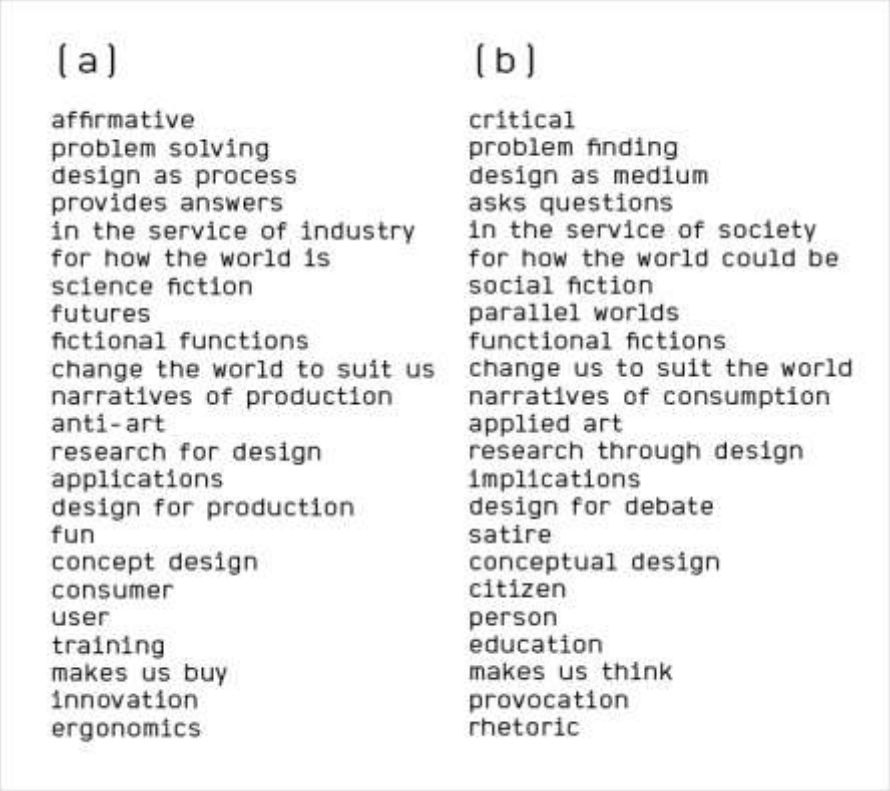

Figure 2: A Manifesto (Dunne & Raby 2009)

As part of the critical design process, alternative values are used like raw materials that are shaped into the critical artefact. This can be considered as a "materialized form of discourse" (Seago and Dunne 1999:17) where the critical artefact exceeds mere "commentary" or "quotation" and itself becomes a "physical critique" (Mazé and Redström 2007:9).

The critical artefact is usually disseminated through exhibition and publication (Bowen 2009:190) and often takes on the form of scenarios shown in books or films that include the designed artefacts (Dunne and Raby 2001:65). In these scenarios, "fictional" or "unreal" values are used in an ambiguous way to encourage the reader to contemplate why the values embodied in the scenario seem unusual (Dunne and Raby 2001:63). Critical design achieves this level of ambiguity by communicating these unconventional values in a "straight-faced" manner with "products and media visualised in fine detail" leaving the reader unsure of whether to take the scenarios or artefacts literally or not (Pullin 2009:122). Critical design uses this ambiguity deliberately as a technique of engagement to provoke a reaction from the reader, mixing fiction and reality, and borrowing from existing commercial structures. "Suspension of disbelief" is a vital method of engaging with the reader: the critical artefact has to strike the perfect balance between being unusual or strange yet grounded upon real human behaviour. If the values within the artefact are too conventional, they will be absorbed without any critical reflection on behalf of the reader. "Too weird and they are instantly dismissed, not strange enough and they [are] absorbed into everyday reality" (Dunne and Raby 2001:63). In order for critical design to be effective, it must create an experience that Martin Amis refers to as a "complicated pleasure" involving the user in a narrative rather than prescribing a generic use. (in Dunne and Raby 2001:63). The idea of a complicated pleasure is something that Dunne and Raby highlight in relation to critical design. Dunne (in Moggridge 2007:595) relates this to design by asking, "How can you design products that provide complex and complicated pleasures, that stimulate our imaginations, create dilemmas, make us think, and rather than smoothing out our lives, actually create glitches?"

Dunne and Raby offer a suitable analogy for these two very different sets of design values. Metaphorically speaking affirmative design can be compared to the genre of the 'Hollywood blockbuster' through its mostly limited range of intellectual engagement, where the "emphasis is on easy pleasure and conformist values" (Dunne and Raby 2001:45). Its opposite, critical design is then film noir, which seeks to confront the values of conventional cinema genres through its dark, disturbing visual style and thematic content, focusing on complex human emotions and behaviour such as "disillusionment, melancholy, hopelessness, pessimism, moral confusion and guilt" (Blaser and Blaser 2008:5). According to Dunne and Raby (2001:46), imagining this concept in the context of design results in:

> Design Noir. As a [design] genre […] would focus on how the psychological dimensions of experiences offered through [design] can be expanded […] this product genre would address the darker, conceptual models of need that are usually limited to cinema and literature.

By taking influence from the genre of film noir in the form of "Design Noir", critical design questions the lack of complex emotional and psychological experiences offered by the current role of design. When it is assumed that the role of design is only to make things positive or 'nice', it prevents designers from engaging with characteristics of human nature that are usually considered to be negative (Dunne and Raby 2007:17). Critical design uses these negative values in a positive way by highlighting the alarming possibilities of the current design paradigm in the form of a "cautionary tale" (ibid.).

The cautionary tale is a form of narrative that warns the reader of the consequences of certain actions or current behaviour. Many works of literature have a way of tapping into the conscience of society by means of their hopes and fears and expose the latent problems within society that have yet to be identified (Hellerung 2005:2). In a similar way, dystopian science fiction uses dark, extreme, over-dramatized, worst-case scenarios of the future as a critique of the consequences of current trends, societal norms or political systems. Where depictions of the future usually appear in works of science fiction, critical design uses the idea of "value fiction" (Dunne and Raby 2001:63). Instead of imagining new elements of science or fictional technology, critical design exhibits exquisitely designed critical artefacts that envision the social values that could possibly emerge in the future as a result of rapid advancements in technology. The apparently "ugly" dystopian vision of the future is undermined by the aesthetic perfection of the artefacts. The reader is forced to face their objections to this presented vision and is challenged to reflect on design's currently held values (Pullin 2009:122).

Consequences (4)

The objective of the critical design process is not to create new products as a way of solving a design problem. Its primary objective is to instill a level of critical reflection within the reader – "design that asks carefully crafted questions and makes us think" (Dunne and Raby in Pullin 2009:121) – or user of such critical artefacts. The artefact becomes a conceptual model, where the arrangement of materials, form, content and context project the conceptual elements of the artefact into the foreground. The critical artefact uses alternative values to prompt critical reflection in the reader in the following way:

1. The reader or user is presented with the critical artefact depicted within a scenario through the medium of publication or exhibition.
2. The alternative design values are played out within the artefacts and scenarios in a straight-faced, ambiguous way.
3. The reader or user then considers why the values within the artefacts and scenarios seem alternative, unusual or fictional.

4. The critical reflection occurs when the reader or user weighs the alternative values against the existing values of design.
5. Critical reflection results in a new awareness of the ideological dimension of design.
6. Awareness of the fact that design is ideological results in a society that plays an active role within their consumption of products and information through design.
7. Those engaging with critical design become emancipated from the hidden coercion embedded within design and ideology.

Conclusion

Critical design is a space for design and the imagination, unconstrained by market forces, client pressures, consumer desires and the like. It is a conceptual adventure in design underpinned by critical reflection, and a platform from which to imagine design futures, present solutions to as yet unidentified problems and it is a vehicle that draws attention to the challenges affecting the human condition.

The visual definition presented in Figure 1, and subsequently discussed in this paper, attempts to demystify critical design, to show it as a conscious and deliberate activity that has the power to transform how we think about design and how that challenges the affirmative design status quo. The pathway to engage in this dialectic follows the key aspects of *critical reflection*, *perspectives*, *processes* and *consequences* identified in the diagram. It also suggests that critical design is able to embrace the entire spectrum of design activity, existing as it does, in a conceptual realm, communicating meaning through abstract ideas and designing with values rather than raw materials. These design values are embodied in context-specific tools, methods and techniques used to create critical artefacts.

Anthony Dunne and Fiona Raby may be the pioneering practitioners of this scrutiny of the interface between design and culture, but it is clear that issues affecting the everyday world – sustainability, education, communication, health, amongst others – require that designers play a more active role in questioning the existing condition and proposing alternative solutions. Acknowledging that they have an authorial voice and encouraging students of design and design practitioners to critique the existing condition opens up the opportunity for reflexive practice. And perhaps as parallel activities critical design can bring richness to affirmative design by presenting less predictable solutions.

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DEMOCRATISING GRAPHIC DESIGN: THE ROLE OF HUMAN-CENTRED PRACTICE WITHIN COMMUNICATION DESIGN PROJECTS

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Abstract

The paper reports on a number of human-centred design projects completed as part of the undergraduate graphic design programme at the Vaal University of Technology (VUT). The value of projects rooted in participatory design practice and social responsibility is discussed in the context of the multidisciplinary nature of graphic design and the opportunity provided by the Higher Education Qualification Framework (HEQF) to re-design existing programmes at Higher Education Institutions (HEIs) in South Africa. Upon reflection, the project findings indicate that the process allowed students to produce visual design outcomes which had value in terms of design as well as community engagement. However, to ensure success design students must be cognizant of well-structured design research methodologies that contribute to appropriate solutions in meeting societal goals.
Keywords: *graphic design, human-centred design, design education, participatory design practice, social responsibility.*

Introduction

The concept of the 'democratisation' of design has steadily gained in popularity in recent years. Warren Berger (2009) defines this concept as multifaceted problem-solving by, amongst-others, citizen-designers. This paper attempts to discuss this concept through the lens of graphic design education. Graphic design has been defined as a collaborative creative process that combines art and technology to communicate ideas through the use of tools such as image and typography (AIGA). Richard Buchanan's (2000, p. 22) definition of graphic design is most apt in context of this paper: "[D]esign is the creative human power to conceive, plan and realise products that serve human beings in the accomplishment of their individual and collective purposes". A significant aspect of this definition is that it focuses on service to human beings rather than on self-expression and market-led objectives, irrespective of the specific area of activity or specialist practice. Contemporary discussions of design in context of its societal associations have surpassed the limitations of typical marketing-led consumer input or considerations of accessibility to broader audiences. The three foremost design paradigms in current design discourse have been described as sustainable design, technologically-driven design and human-centred design (Giacomin 2012).

Human-centred design is considered a suitable methodology for the integration of a social dimension into the design process. Design academics are increasingly of the opinion that human-centred design and research methods should be an integrated component of the design process (Hanington 2005, p. 2). At the time of writing, Cape Town has been designated as World Design Capital (WDC) for 2014, the first city in Africa to be awarded this accolade. The WDC 2014 theme of *Live Design, Transform Life* offers a socially transformative agenda for the planned projects and events which are to take place. It is suggested that the WDC programme could be a catalyst for the ushering in of socially conscious design onto the local arena and offering local design talent an opportunity for showcasing their skills (M'Rithaa 2013). It is the premise of this paper that socially

responsible design practices such a human-centred design are fast becoming an integral part of multi-dimensional graphic design practice and that, in order for graduates to succeed in this environment, graphic design programmes must be re-conceptualised to incorporate the principles of human-centred design as a core philosophy of its curriculum.

This paper reports on two human-centred design projects completed as part of the undergraduate graphic design programme at a university of technology (UoT) in South Africa. The teaching and learning that took place is discussed and critiqued as a possible approach to design education and practice. Upon reflection, the students' experience of the human-centred design approach as applied to Communication Design projects was overwhelmingly positive and could be considered as validating the broader implementation of human-centred practices within graphic design curricula.

Background

As early as 1971, Victor Papanek called for designers to adopt a role of increased social and moral responsibility in his seminal text *Design for the real world: Human ecology and social change* (Papanek 2009, p.345). The role of the graphic designer is still being continuously re-defined in ways that attempt to challenge the outdated notion that design is 'merely' a service industry. In addition to economic approaches, design professionals are increasingly addressing a range of social, cultural and environmental challenges in their practice with constantly evolving design strategies and methodologies. Contemporary design academics have observed that in the twenty-first century "every designer is a citizen, and every citizen is, to some degree a designer" (Lupton 2005, p. 12). Therefore the concept of 'what design is' is changing, as the design profession is adapting to participate in new forms of practice that embrace multi-dimensionalism and the role of citizen participation in the design process.

An awareness of the importance of the socio-cultural role of design has existed for some time amongst members of the broader graphic design community, but this was seldom embraced in mainstream practice (Lupton 2005, Papanek 2009). The *First Things First* manifesto, initially published by designer and academic Ken Garland in 1964, was re-launched as the *First Things First 2000* manifesto by *Adbusters* magazine in 1999. The manifesto rallied against consumerism and attempted to promote a more humane approach to graphic design. The *First Things First 2000* manifesto further fuelled the debate amongst the international design community regarding the emerging schism between self-serving commercial design practice and socially responsible design. Consequently, Rick Poynor (2002, p. 10), one of the coordinators of the *First Things First 2000* manifesto and founder of *Design Observer,* criticised the premise of the manifesto and remarked that the majority of design products address corporate needs and therefore the role of graphic design is, in fact, primarily determined by economic considerations.

Nonetheless, diverse schools of thought exist; designers such as Yoko Akama (2008, p. 20) argue that design must be positioned as "an integral part of the political, social, cultural, environmental, commercial and technological world around us". This is, however, often not the case as Akama (2008, p. 20) is of the opinion that in design practice the role of socially responsible design is frequently addressed through simplistic solutions such as pro-bono work for charitable institutions or through environmentally responsible production. The role of the 'socially orientated' graphic designer remains a pressing topic amongst designers and academics, with several international educational institutions addressing key issues through curricula dealing with topics such as human-centred design, co-design, participatory design, service design, experience-based design, sustainable design, design activism and design thinking as key strategies for the viability of design products.

Design within higher education

While design education in South Africa must take cognizance of international developments in the discipline, it must also respond to peculiar national and institutional imperatives. In short, higher education in South Africa must equip graduates to contribute to the country's social and economic development and HEIs must fulfill the core functions of teaching, research and community engagement (Rosochacki & Costandius 2012, p. 166). Consensus has not been reached regarding the most effective ways in which Higher Education Institutions (HEIs) should address community engagement and social responsibility (Van Schalkwyk & Erasmus 2011, p. 58). One approach that has achieved some success and that has certain similarities to human-centred practice is service learning (SL). SL is an experiential, community-based reciprocal pedagogy often employed as a strategy for educational reform. The teaching of human-centred design within an SL framework delivers mutual benefits for both the understanding of human-centred design and for facilitating service learning (Zoltowski 2010, p. 9). In South Africa, SL has been embraced as one of the means of responding to the government's call for universities to engage with local and national developmental demands (Osman & Attwood 2007, p. 16). Another aspect of service-learning known as project-based learning (PJBL) could offer additional possibilities for the inclusion of human-centred design principles into design curricula. PJBL brings together intellectual inquiry, real-world issues, and student engagement in relevant and meaningful work (Barron, Schartz, Vye, Moore, Petrosino, Zech, & Bransford 1998; Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar 1991). While there is a dearth of scholarly literature on human-centred graphic design in South Africa, the field of service learning has been well documented since its inception at several South African HEIs in the 1990s. The concern that service learning may be practiced at a charitable level without genuine community participation and engagement (Mahlomaholo & Matobako 2006, p. 214) aligns with the concerns raised by academics involved in the discussion of human-centred design projects (Akama 2008, for example).

The manner in which human-centred design is taught at South African institutions, if at all, has not yet been properly documented. Internationally reputable programmes in human-centred design do exist (for example at Carnegie Mellon University, USA, d.school at Stanford University, USA, Emily Carr University of Art and Design, Canada). However, these are seldom situated solely within design departments, are often generic and serve students from a variety of faculties. In South Africa, human-centred design is taught mostly within the parameters of the user-centredness contained in architecture, product and interaction design, information technology (IT) and information and communication technologies (ICT) curricula. When included as a component in graphic design programmes the approaches differ depending on the historical context of the institution where, at universities, entrenched tradition provides opportunity for engagement with the philosophical and theoretical concepts associated with human-centred design whilst UoT's have, to a smaller or larger degree, retained some of the legacy of the technikon education system (possibly, in part due to the admission criteria which are far lower than for a 'traditional' university) by continuing to focus teaching on skill acquisition and vocational readiness. When taught at all, human-centred design is encapsulated in stand-alone modules or is taught under the umbrella of philosophical concepts such as *Design Thinking* (Cassim 2012, Rosochacki & Constandius 2012). Design thinking, a creative problem solving approach which incorporates many of the aspects associated with human-centred design is often suggested as a novel approach to design education. As design thinking and human-centred design are often referred to in parallel, misconceptions may arise as to the relationship between the two concepts. Whereas Brown (2008, p. 37) defines design thinking as "a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible", a human–centred approach focuses foremost on human and societal needs.

At the time of writing a mapping of what precisely encompasses human-centred design, and a systematic, in-depth, comprehensive academic discussion of the teaching and learning strategies for human-centred design within South African design programmes have yet to take place. Fittingly, a major revision of the Higher Education Qualifications Framework (HEQF) is currently underway; this provides the opportunity for

appropriate programme review to take place. The objective of the HEQF is to locate all higher qualifications within a single framework and to ensure that qualifications are appropriate to certain defined qualification purposes and that they answer to the mandate of specific types of institutions. All HEIs are required to review their programmes and to re-structure and re-curriculate where necessary (Mthembu 2012, p. 188). Based on information gathered from two surveys (in 2012 and 2013) of design departments in South Africa, a number of departments are currently restructuring curricula to include a broader focus of social responsibility. However, as none of the departments surveyed had completed the process, it may be too early to ascertain whether any of these are actually considering the inclusion of human-centred principles as a core teaching and learning strategy, and concomitantly, whether key features recommended for human-centred design such as the integration of ethnographic research methods will be included. One instance of reconsidering curricular issues in light of the human-centred imperative is the inclusion of human-centred research approaches into Communication Design projects. This will be discussed below as the crux of the current paper.

Project description

The projects described in this paper take place within the graphic design section of the Visual Arts and Design department at the Vaal University of Technology (VUT), the former Vaal Triangle Technikon. At present, the graphic design programme at the VUT is being reviewed, in terms of meeting the requirements of the new HEQF and an institutional decision to concentrate on the development of diploma qualifications has been made. It is, of course, imperative that curricular re-conceptualisation is in line with the fast-and-ever changing needs of the graphic design industry. The graphic design section at VUT takes cognizance of a recent American Institute of Graphic Arts (AIGA*b*) discussion document on the strategic role of graphic design education and is in the process of re-framing the existing programme with the following concerns in mind:

1. The usefulness of the design outcome,
2. The usability of the communication product,
3. The desirability and or perceived benefits of the design outcome,
4. The sustainability and lifespan of the design products,
5. The feasibility of the communication in terms of production and distribution,
6. The viability of the design outcome and the potential for return on investment,
7. The complexity of the design outcome that must be achieved through means such as interdisciplinary collaboration and seeing design as a system-level activity,
8. The practice of responsible design - designing for and with people (AIGA*b*).

AIGA proposes that new design curricula should be informed not only by the needs and wants of the client and the context of the graphic design brief but also by the practice of responsible design led by a deeper understanding of human behaviour (AIGA*b*). Furthermore AIGA has identified subjects as diverse as anthropology, computer science, psychology and engineering as being of particular relevance to future designers. Indeed, the introduction of certain modules grounded in these subjects is currently being considered at VUT. Similar concepts have been considered by other South African design educators with a growing awareness that “active learning” (learning being embedded in the context of culture, and being focused on practice, community, identity and meaning) is essential in the formulation of graphic design curricula (Duker 2011, p. 71). Duker describes learning activities in this context as being “engaged and dilemma driven” with an “emphasis on the transformation of the whole person” as opposed to the mere dissemination of factual information (2011, p. 71).

Although some aspects of human-centred design, such as the development of critical thinking skills and attention to collaborative engagement are presently included in the teaching of graphic design at VUT, this approach remains on the periphery of the broader programme and approach. Nonetheless, one should keep in mind that the institutional focus at the VUT is on “becoming an active role player in the community, society

and the broader context" (Johnson, Louw & Smit 2010) with an emphasis on entrepreneurial engagement and innovation. VUT's chancellor, Prof. Irene Moutlana has remarked that the mandate of HEIs, is the creation of knowledge, and through partnerships with relevant industry the transfer of this knowledge to the community (De Beer 2010, p. 90). Furthermore, Moutlana recognises that as part of the university's mandate, over and above teaching and learning, HEIs have a "public life" and need to make a social contribution. One could argue that embracing emerging trends in design practice such as a focus on human-centred design, coupled to the opportunity provided by the HEQF to redesign programmes, may facilitate the offering of graphic design programmes at VUT that address the national imperatives of social cohesion, job creation and community engagement and answer to multi-dimensional disciplinary challenges.

The graphic design programme at the VUT offers undergraduate (currently National Diploma and BTech) and postgraduate (currently MTech) qualifications in graphic design. The Diploma in Graphic Design comprises an undergraduate curriculum that has its roots in the vocational-type instruction formerly offered at most former technikons. As the great majority of first year students entering the programme have had no former art or design training, the first year of study consists of a foundation course in design with a large proportion of the instruction focusing on basic conceptual and technical skill acquisition. As part of this foundation all graphic design students are taught a typical process (summarised in Figure 1) in order to answer the design challenges posed within studio-based projects.

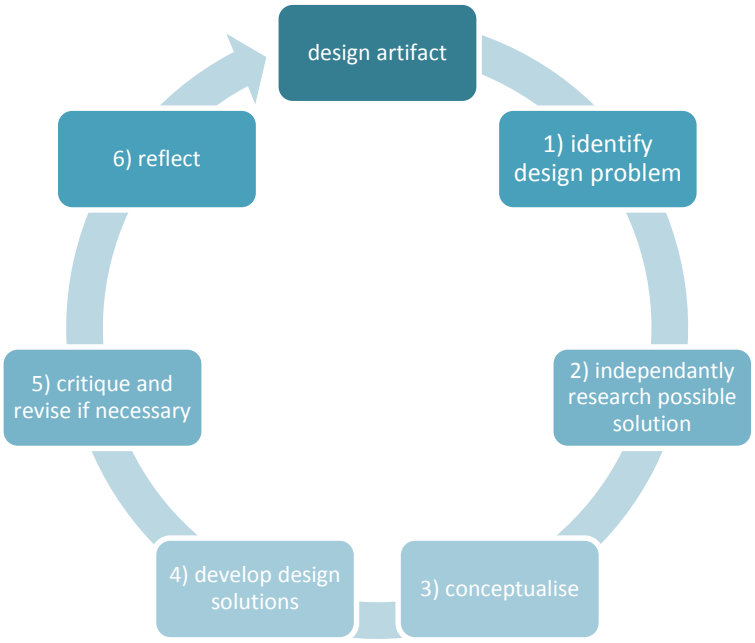

Figure 1: Typical design process

The above process places emphasis on the outcome which is the resultant design artefact. However, in order to apply human-centred design principles students must be cognizant of the contexts and meaning-making potential of the content of the artefact. This is important because in contemporary practice, the aspirations of design professionals are no longer solely focused on fulfilling the aesthetic expectations of a client but rather on formulating a holistic and strategic process where the products of design acquire new meaning which increasingly includes a socially responsible dimension. In a human-centred design approach the emphasis of the design process is on so-called 'design for social good' through participation and empowerment. Therefore, according to Kazmierczak (2003, p. 48), within contemporary design practice the content of a design is no longer sought in the artefact itself. It becomes a receiver's thought, which is constructed through the receiver's contact with a design. As such, it is created and owned by the receiver or audience for whom it is intended. In order for undergraduate students to understand audiences, meaning, value and participation in a human-

centred context, the methods applied to point 2 on the process illustrated in Figure 1 (*research possible solutions*) should be appropriate, flexible and framed within the parameters of design thinking.

Students are better equipped to deal with conceptual and theoretical aspects as from the second year and the inclusion of human-centred principles and factors is introduced in a limited number of studio-based projects. It is at this level that students are introduced to briefs which originate from actual clients who approach the VUT's graphic design section for assistance with design problems. This contributes to the development of particular types of knowledge that help to equip students for the purposes of direct interaction with actual people and 'real-world' problems. We hope that exposure to the basics of human-centred design at this level of study will assist in developing a passion in the students for advocating real-world problems, and for designing with real users and audiences in mind.

At third-year level at VUT students are exposed to human-centred design through an integrated 5-week module which includes theoretical and practical outcomes grounded in human-centred design philosophies. This module includes the following components:

1) An introduction to human-centred research methods including interview techniques, data collection instrument formulation, early-phase data collection techniques and on-going concept development.
2) An introduction to individual, social, cultural and emotive human factors that impact on design conceptualisation and development.
3) An introduction of participatory methods and collaborative design activities.

The project includes a student-led enquiry whereby students are given the opportunity to explore the above concepts in context. This step provides an opportunity for the students to engage in a consultative, immersive process with various stakeholders to investigate and explore the designer's role in enabling and facilitating stakeholder input in the design process. Thus, a more human-centred design process has been developed and is currently being applied to third year and BTech Communication Design projects at the VUT (see Figure 2). The students are required to identify a potential client within their communities and to collaboratively develop a brief which delivers or enhances design solutions to be used within a commercial application. The complexity of the design problem is determined by the student and client who work collaboratively. The problem identification phase requires students to conduct extensive research into the scope and depth of the design problem, because we believe that in order for the design to be applicable, the students have to gather as much information as possible regarding the user. The conceptualisation of possible solutions is a collaborative exercise which includes all stakeholders. The clients are encouraged to contribute to the final design artefact by providing significant input in the development of the design solution, in taking design-based decisions (such as choosing appropriate typefaces for example) as well as in contributing to the students' reflection-on-action by critiquing and commenting on the design prototypes. The students are made aware of the importance of the client/user participation throughout the process. Although this project has a commercial outcome, the foundation of human-centred design principles is laid through the incorporation of participatory practices, the focus on user-centred research and data collection methods, and the continual emphasis of the social dimension of design production.

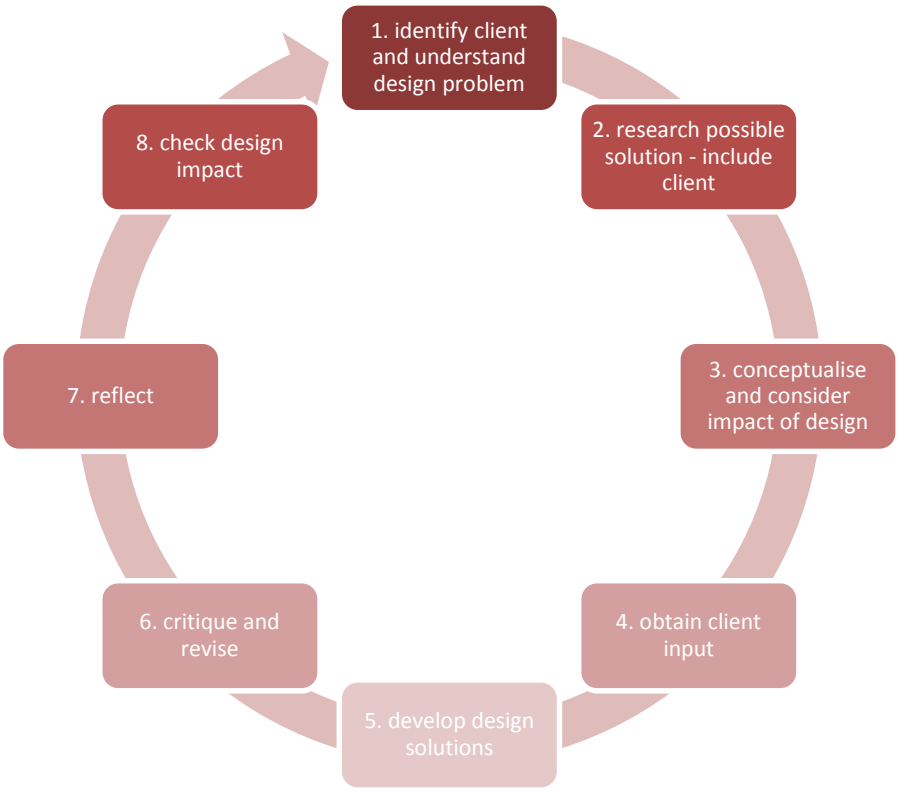

Figure 2: Typical human-centred design process as applied to Communication Design projects at VUT

Typically at the fourth year of study (at VUT this is at BTech level) students who participate in the human-centred design project have had prior exposure to the principles and philosophies of human-centred design as from the second year of study. Although the 5-week module follows a similar process as at the third-year level, the emphasis is on the social aspect of the design outcome. Here the students are encouraged to work individually or in small groups of two or three students in order to identify clients for whom the design solution would have a significant social impact. At the time of writing, sixteen students have participated in the project and all have opted to work in groups. As a result some of the projects identified include the development of a recycling campaign for a local school as well as the development of an awareness campaign for the local taxi association. One project (the development of a new corporate identity for a local NGO - a residence for mentally challenged patients which provides basic skills and training) resulted in students' on-going involvement with the design and marketing of products produced by the residents of the facility. It is interesting to note that when reflecting on the project outcomes the participating students noted that they derived a greater measure of satisfaction from those projects which had the most perceived social impact. Importantly, when asked to reflect on the project from a holistic perspective students indicated that the application of human-centred, participatory research methods in context of 'real-world' problems, has replaced their previous negative perceptions associated with research-based work.

Conclusion

Contemporary professional design practice draws on advanced multidisciplinary knowledge that presupposes interdisciplinary collaboration, and that requires a fundamental change in the traditional approach to design education. In order to serve human beings properly, outstanding professional designers must master the art of human engagement based on ethics and care (Friedman 2012, p. 150). Additionally, in order for a human-centred democratisation of design to take place the power relationship between audiences and designers must change. From a design education perspective, Cassim (2012, p. 19) suggests that "more attention needs

to be given to the nurturing of design thinking skills within an educational context". The projects described above have informed the conceptualisation of the re-curriculated graphic design programme at the VUT. The importance of the inclusion of research methods for design at introductory undergraduate level has been the most significant impact of the reflection upon the teaching and learning processes which take place in these human-centred design modules. Furthermore, it is envisioned that in future the design curriculum at VUT will include core modules in human factors and design thinking which will equip future graduates with the skills, knowledge and disposition for creative, human-centred design outcomes in their practice.

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ETHICS IN DESIGN RESEARCH: A REFLECTION ON INTERCULTURAL PRAXIS IN THE DESIGN DISCIPLINES

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Abstract

Qualitative research techniques lend themselves to research activities in the design disciplines due to their strategies to extract data that contain intangibles such as emotions, aesthetics, perceptions, embedded cultural practices, artistic and creative activities. The engagement with subjects that hold this data is guided by ethical codes of conduct and is governed by ethics committees that provide approval for such research engagement within a university environment. Nevertheless (and inevitably) design research in the creative disciplines has moved into ethnography where the Eurocentric process of collecting data and the associated ethical guidelines and approval process may no longer be relevant, fair and appropriate. This paper is a reflection on ethics and research conduct when research data gathering takes place in indigenous knowledge and where the researcher works from a position of power. Drawing on the work of scholars in countries such as Australia and Canada, this paper presents current trends in thinking in the domain of research ethics and data gathering when engaging indigenous communities. It argues for changed strategies around permission granting, research practices, and related aspects. Centrally, because of the reconsideration of the ethical dimensions of research, this paper suggests that engaging in design research in and with different cultural groupings may require a methodological research shift from data extraction, analysis and use, to "participatory and joint ownership". The process of granting permission is no longer just a function by an ethics committee, but also by variables connected to the research subjects or object of investigation.
Keywords*: Ethics, Qualitative research, Indigenous Knowledge Research.*

Introductory comments

Design research in South Africa is mostly conducted by staff members and students at traditional universities and universities of technology to obtain higher academic qualifications. Some students and staff from design disciplines are invariably drawn to the visual richness of South Africa's indigenous communities. The artistic work of these communities provides opportunities for ethnographic research and data collection about crafting, traditional practices, traditional designs and decorations. This type of data may contain intangibles such as emotions, aesthetics, perceptions, cultural, artistic and creative activities and practices. Significantly, such cultural practices and responses are deeply embedded in senses of ownership, individuality and communal interconnectedness. Consequently as researcher or research designer engage with such indigenous communities, central concerns around ownership, sharing, access, mutuality and benefit need to be placed in critical areas of negotiation. However, the very nature of intangibility of much of these domains makes the interface between designer and community ethically fraught with problems. In our experience many designers in South Africa, placed in this research situation, have attempted to follow specific guidelines embedded in traditional research processes. However, as we shall attempt to argue, such 'traditional' research paradigms are inadequate to engaging in the intangibilities, and therefore an alternative approach needs to be presented.

The two case histories from Canada and Australia open out this new strategy of ethical engagement and might provide a model for the South African situation.

The definition of design research, in the context of this paper, encompasses three areas. The first would be one of recording phenomena such as in historical, anthropological and archival research. It is a research procedure that documents and preserves the artifacts, practices and cultural processes of a particular community. The second area is about doing research on, or in a community so that the design aspects present in that community could be utilised by the designer in his or her own project. Typical examples are where architects or designers adapt and incorporate an artwork or design from a community into a building or a company's corporate communication. The third area of design research is what could be described as the cornerstone of "community engagement". It's a process where the expertise of the designer, and the necessity to do design research, meet the demands of the community. Academic staff members and students that complete a research project in a community for a higher qualification, and where such a community derives some benefit, are typical examples. This paper addresses specifically the third demand, although the second one is also relevant. It does not necessarily engage with the first procedure (although the implications are still present).

Communities that hold these data or exhibit these phenomena, do not necessarily have the same power basis as the researcher, and are likely to be from a different cultural group than the researcher. This holds true specifically for the South African context at the present time. Even if the researcher and the subjects shared the same cultural background, the power dynamics that exist between these two parties always creates an imbalance in power in favour of the researcher. This unequal process is widely debated and critiqued by a number of scholars (Ball & Janyst 2008; Scarangella 2004; Ermine, Sinclair & Jeffery 2004; Posey 1996). The potential for unfair exploitation is enhanced because most research on or about indigenous people and indigenous knowledge is conducted by non-indigenous persons (Ball & Janyst 2008). Researchers in this unbalanced relationship, even unknowingly, may use their position to exploit the data holders to their benefit.

A good example of such a biased relationship is evident in the heritage sector. Prominent heritage organisations such as the National Heritage Council, South Africa (NHC) (2012) and the United Nations Educational, Scientific and Cultural Organization (UNESCO 2011), do not address this imbalance. The ethical guidelines in their publications only advocate the typical ethical conduct one encounters in most institutional ethical guidelines such as acknowledgement, respecting people, avoiding stolen goods, and a general professional conduct. We suggest in this paper that the notion of 'general professional (research) conduct' is in need of re-interrogation. The NHC (2012) in particular, has an extensive list (2012: 118-131) that deals with personal conduct of the researcher and how to interact with the public/community. However, both the NHC and UNESCO, do not address the deeper involvement of communities that are objects of research, nor the position that members of such communities must or could occupy in the artefact and data collection process and utilisation. Even a South African draft bill (Dean 2010) about the protection of indigenous knowledge is somewhat silent about the ethical conduct of researchers. One can rightfully argue that a bill that is proposed to protect defined items will only do that, and not address the conduct of others who will attempt to circumvent (or exploit) the items under protection. This bill makes provision for the protection of indigenous works, designs and marks and proposes a national register, council and trust fund. Whilst the intention of such a bill is admirable, the normal legislative process requires a complex legal route that persons must follow to protect indigenous works and graphics and a similar process to seek compensation if indigenous works and graphic rights are violated. This process would make it near impossible for small cultural groups to seek and enforce protection of their works, designs and unique marks. We also doubt that communities who may hold aesthetically valuable works and visual designs and artefacts, will have the necessary know-how and impetus to go through the legal processes to protect their work and through litigation seek redress if they feel that they are exploited. This issue of inadequate protection, even when there are laws with good intentions, is fittingly

critiqued by Posey (1996: 7) more than fifteen years ago: *" … law cannot adequately resolve the issue of access and benefit sharing raised by the terms of the CBD [Convention of Biological Diversity]. IPR [Intellectual Property Right] law provides indigenous peoples with few legal courses of action to assert ownership of their own knowledge because the law simply cannot accommodate complex non-Western systems of ownership, tenure, and access."*

This is a critical point. We argue that design researchers need to understand that there are legal implications in any arrangement of research practice and these have to be adhered to. However, centrally, the legal matters should not form the basis only of fulfilling research obligations – the fundamental concern should be the ethical implications, perhaps seen over and above the legal concerns. Drawing on ethical theory the fundamental difference lies between what research *must* do, and what they *ought* to do. The former is the legal matter' the latter is the ethical. Within out argument below, there should therefore be a clear move away from obligation to reciprocity.[i]

Given the potentially cumbersome legal route for the protection of such phenomena, it seems that moral principles should be the guides for researchers. The aim of this paper therefore, is to reflect on the possible current deficiencies in research ethics that govern the data collection process, and to argue for changed strategies in ethical conduct during the data collection process and interaction between the two parties.

The need for ethical policies to protect the data holder in South Africa

We are not aware of an act, a bill, white paper or position paper that specifically deals with ethics and design research.[ii] A review of legislation documents, such as acts, bills and white papers, applicable to the Department of Arts and Culture, and the Department of Science and Technology, produced one policy document about Indigenous Knowledge Systems. One working document only briefly refers to issues of protection and promotion (Department of Arts and Culture 2009).

The Biodiversity Act, no 10 of 2004 (South Africa, 2004) covers bioprospecting and indigenous communities. This act may not be directed at design or cultural artifacts, but nevertheless provides some insight into the lawmaker's perspective on ethics during a process of collecting information from indigenous communities. The aim of this act, in terms of bioprospection and research, is to regulate these processes and to ensure that there is a *"fair and equitable sharing among stakeholders of benefits ...".* (South Africa 2004: 22). Whilst the regulations in this act are primarily directed at issues of development and application, it also applies to basic research activities such as collecting. One may argue that this act is about the environment and biodiversity, and that it is not applicable to design. The *spirit* of this act is however clear: indigenous communities and their knowledge banks require protection and that they must share in benefits when commercial 'exploitation' or exploration takes place. What is notable is that permits, benefit-sharing, and material transfer agreements (the legal requirements) must be in place before research may proceed. We argue, however, that this is not sufficient – the ethical implications have also to be addressed.

The Protection of Traditional Knowledge Bill (South Africa 2013), released in April 2013, is more appropriate to design as it covers traditional (performance) works, marks and designs. The bill lists 16 objectives, such as protection, licensing, recognition, regulation and the establishment of a trust. Traditional designs and marks receive protection if they are recognised as belonging to a specific community, and it gives exclusive rights to the community. Paragraph 41, that deals with moral rights, even allows the owners of a protected design or mark to object to the distortion or modification thereof, if this damages the honour of the originating community.

The bill provides some relief for the academe. It will not be an infringement to produce an item which embodies the traditional design for research and teaching purposes. The bill however, does not elaborate on collection processes and ethical concerns. A section at the end of the bill aptly summarises the intentions: "*The proposed legislation seeks to effect the Goverment's policy to recognize and afford protection to indigenous knowledge as a national heritage and asset, to ensure that indigenous communities benefit from such recognition and protection, and from the commercialization of this asset*" (South Africa 2013: 29-30).

The National Heritage Council released a position paper on ethics and professional standards (National Heritage Council 2011). This document provides a framework for ethical standards and professional conduct to guide the actions of heritage institutions such as museums. (In this sense, the bill speaks to the first process of design research, namely archiving, listed above). The section on research lists four items that heritage researcher must consider when dealing with communities and individuals namely, respect and sensitivity, informing communities about the project, how their data will be used, and obtaining permission to publicise the results. The items are however generic, and do not suggest a new or novel perspective on (nor strategy for) ethics and design research. Similarly, a draft policy on a National Policy on South African Living Heritage by the Department of Arts and Culture (South Africa 2009), also loosely refers to issues such as permission, consultation, consent and that profits must be used for the benefit of the communities from which the data came. This same trend of general reference to ethics is even reflected in a UNESCO (2011) publication about identifying and inventorying artefacts the world's cultural heritage. A small section at the end, only lists one item, namely, that the researcher must obtain consent from the community and that could then be construed as an ethical issue.

The National Research Foundation (NRF) has taken an initiative to correct this imbalance when they issued a call in 2012 for projects in indigenous knowledge. One of the conditions was that the indigenous person had to be an equal partner in the project. The call went even as far as to allow an indigenous knowledge holder to apply for funding but the data holder had to partner with a university or research institution. They also required that projects must *"appropriately acknowledge those who contributed intellectually, e.g. knowledge holders as holders of intellectual property and not as mere subjects or informants."* (NRF 2012).

The above section is a brief reflection on policies and legal documents that indicate what *must* be done, rather than what *ought* to be done from an ethical perspective. A designer following the "letter of the law" by using the 2013 Protection of Traditional Knowledge Bill will be able to abuse and misuse the designs and artistic artefacts of indigenous communities as long as these items are not appropriately registered and protected under current legislation. However, ethical conduct is more than obeying the letter of the law and working within policy guidelines. Ethics in research has to do with good practice and embraces concepts such as beneficiation, non-malfeasance, justice, dignity and autonomy in research practice. These are moral issues that should infuse a researcher and direct research practice. Centrally, we would argue, all of the above suggests, either directly or indirectly, that the researcher, the maker of archives, the designer – in short, those who have 'power' over systems of research, archive development, design, and so forth – assume a position of power (overtly or covertly) in the relationship between "knowledge" and the community. In our view this is potentially unethical, but more importantly, it is deeply disempowering. It is in particular the work of the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) as well as work by Ermine, Sinclair & Jeffery (2004) in Canada that address issues of moral conduct and behaviour when doing research with indigenous communities. This is reviewed below. We argue that they address the notion of disempowerment, conjoint responsibility and mutuality as core ethical values in their work.

The position in Canada and Australia

The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) produced guidelines for ethical research in Australian indigenous studies (AIATSIS 2012). Although their approach is not directly linked to design research and speaks more to 'traditional' research, they have gone a long way down the road of setting up the research as a process of mutual empowerment. This policy document forwards 14 principles and these include the more well know principles such as recognition, respect, consultation, and negotiation. However, it is particularly guidelines discussed in Principles 10 to 13 that deal with participation, benefits, needs of the participants, and the use of the results that could be useful design researchers in South Africa. These principles, for example, stipulate that participants must agree to what will happen to their contribution if they withdraw, that some information is owned and may require payment, that research results must be useful to the person or communities, that participants must have ongoing access to research results, and that researchers must report the results to the community before they publish. It is beyond the scope of this paper to elucidate the entire publication, but it suffices to state that the gist of the guidelines is that participants and communities are full partners in research projects. This concept of equal partnership is similar to the NRF's position discussed earlier.

Although the spirit and the intention of these guidelines are commendable, they are still projected from a position of power and Eurocentric perspective. The tone and directives in the policy are what to do when working with the "others" and how one's conduct must be, when working with them. Principle 5, that deals with respect and protection, states, for example, that, "Once Indigenous knowledge is recorded, it becomes property as defined under Western laws and concepts" (Ibid. 8). Even if an indigenous person becomes an equal partner (principle 10), the Eurocentric philosophy has effectively transferred the ownership to another person or part ownership if the indigenous holder has indeed become an equal partner. This may, of course, be seen as adhering the legal aspects of registration of Indigenous Knowledge, for example, as demonstrated in the various South African documents, if such registration documents are returned to the community (in the spirit of reciprocity), but we are unsure if this was the intention. Nevertheless the 'tone' of 'claiming property rights' can be seen as disempowering at time.

An alternative approach emanates from Canada. The Indigenous People's Health Research Centre (IPHRC) in Canada produced a report about research that involves indigenous people in order to *" … contribute to the wider understanding of research ethics issues as they pertain to Aboriginal peoples and communities"* (Ermine et al. 2004: 2). What makes the nature of this report different, is that the authors are indigenous to Canada and it is written from the perspective of an indigenous community. It is interesting to note that the Australian AIATSIS publication instructs the *researcher* what to do, whilst the 'indigenous' Canadian IPHRC publication instructs the *indigenous person* what to do in a research relationship. This is a very important development because it refocuses the process as a joint sharing operation, it empowers the engagement through encouraging equal reciprocity, and it opens up, perhaps for the first time, the perspective of acceptable behaviour on the part of both parties. It also enters into the research domain the *actual* demands of the researched, as opposed to the assumed demands, as constructed from a Western, dominant, individualistic, research culture.

The tone in the IPHRC is also more assertive than the AIATSIS publication. Some examples are that: *" … empowerment and benefits must become central features…", "Indigenous people must also exercise control over all research conducted …", " … institutions should return all elements of Indigenous Peoples heritage to the traditional owners on demand …*", and even that professional persons and scientists should sponsor seminars to promote ethical conduct and go so far as to discipline members that act in an unethical manner (Ibid. 46-47, emphasis added). The assertiveness of this document is further emphasised where the authors state in their recommendations that the current 'Eurocentric' mode and approach to research requires a radical shift and

that new views are required. They even speak to the West and state: *"For the West, not only must the discourses of intolerance be allowed to implode under the weight of their own reasoning, but alternate venues of expression have to be offered in the place of their own deficiencies"* (Ibid. 45).

The document concludes with 9 recommendations, but significantly devotes a (small) section under a heading "Advancing the Ethical Space". This section does not spell out ethical steps and codes of conduct for researchers but talks about an '*ethical space'* where *"interests and hidden agendas are left behind"* (Ibid. 46). Reading the final guidelines, one comes to the realisation that a non-indigenous person wanting to do indigenous research cannot operate from a position of power anymore. The roles have shifted to some extent and a researcher is no longer the person who can negotiate access. He or she has now become a person that may or may not be allowed, but rather only really on the community's terms. It is the indigenous community that makes the decision as to what research needs to be done and how it will be conducted in their community. This is the only publication that we encountered that reflected an indigenous ethical perspective. The Eurocentric perspective provides guidelines to researchers on how to conduct themselves and how to treat others (from their positions of power), whilst this "indigenous ethics document" places the indigenous person in power. The underlying message is how an indigenous person may or should manage the "intruding" of the non-indigenous researcher. The researcher now becomes a servant to the community and no longer may use the community. It is in this sense, therefore, that the notion of committed 'community engagement' as outlined in our introduction is foregrounded.

Discussion and concluding comments

Design research in South Africa is still in its infant stage when compared to the more established research fields. This is not unexpected given the history of design training, the development trajectory of universities of technology and the physical isolation of South Africa from the English speaking institutions in the Northern Hemisphere. It is then also understandable that ethics in design research conduct is not a widely discussed and debated issue. This deficiency, the lack of a clear applicable national policy, the infancy of design research, and the large indigenous population in Southern Africa provide an ideal cauldron to grow ethical guidelines for design research.

We may argue that a number of staff and research students are indigenous and that one does not require guidelines for your own ethnographic research. This may or may not be true as the conditions in South Africa are different from those in Canada (Ermine, et al. 2004) and Australia (AIATSIS 2012). The Eurocentric perspective influences society in these countries, and indigenous communities invariably become targeted more than in South Africa due to the higher researcher / indigenous person ratio. Publications in South Africa that deal with ethics or even a peripheral view are however drafted from a Eurocentric perspective. We do not have a perspective on design ethics that speaks from within and from the indigenous community -- an 'indigenous community-driven ethics approach' as it were. Ethical guidelines that require the customary signing of consent forms, the distribution of information leaflets and some form of beneficiation may not be appropriate when doing design research in South Africa. Developing a play for example, based on an indigenous story may require permission from a healer, who in turn may consult forefather spirits. The concept of obtaining a signed consent form becomes obsolete in such a situation. Similarly, engaging an elder in order to obtain information may require greeting the person with his praise name, an extended social protocol, and even providing a small gift. This small gift for the elder could be a sign that the person is looking for as a sign of submission or respect before any research engagement could start. Requiring such an elder to sign a consent form, and then to read an information leaflet, may be seen as disrespectful behaviour. Alternatively, seen from a western perspective, offering a 'gift' to open channels of communication might be seen as bordering on a 'bribe' – a matter potentially more problematic when a community leader is 'granting

permission' for this in his or her community, where it might be that the community members 'have no say' in such permission granting.[iii]

In conclusion, we would like to argue that engaging in design research in and with different cultural groupings may require a methodological research method and design shift from data extraction, analysis and use, to the equalising of participatory practices and joint ownership of project, process and outcome. The process of granting permission is no longer just a function by and for an ethics committee review (a tertiary institutional 'policy or legal requirement' to 'protect' the university), but should also be by and for the world view, the cultural and inherent ethical orientation of the research participants. It is only when a researcher and the participant community work in the same Ethical Space (Ermine, et al. 2004) that concepts such as beneficiation, non-malfeasance, justice, and dignity becomes part of the researcher's experience because they should be shaped, moulded, negotiated and fixed by the community of *all* participants. A moral and closer synergy between a researcher and participants, for example, may make participation more effective in a community engagement project and may help to obtain a deeper meaning of a design during ethnographic historical research. Alternatively, such a levelling of the power positions, we argue, will, of necessity, enhance both the richness of the design research *and* the richness of the indigenous community life.

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PROBLEMATIC MOTIFS: PORTRAYALS AND IDENTITY CONSTRUCTION OF WOMEN IN VISUAL CONSUMER MEDIA

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Abstract

Considerable criticism has been levelled at problematic visual portrayals of women in consumer and popular media. Current Western media landscapes feature images of women that engender problematic 'narrow' identity constructs – marginalising agency and intellect, promoting physical idealisation, sexual objectification, and commodification – and, as such, reproduce patriarchal discourse. Despite the rise of feminism and the resultant increased awareness of and advances in the area of gender equality, stereotyped images of sexualised, objectified and idealised women seem to persist globally and in South Africa. Images exert discursive power and have the ability to shape people's identities, beliefs, and behaviour. In this way, consumer images possess 'normative' authority and are able to mediate identity. Media representations that objectify women, sexualise them, and remove intellectual and authoritative agency are unhealthy, even destructive, especially considering the social challenges present in South Africa, such as the disturbingly high incidents of gender violence and rape.

Within this context, design education has a responsibility to advocate an approach that carefully considers the role that visual media representation plays in shaping identity and works towards more constructive and ethical visual practices. Students, as future professionals in the visual communication industry, including graphic design, photography, and art-direction, need to understand and appreciate the important role they play in mediating 'personal' identity, and ultimately in shaping collective 'community' identity.

This research paper functions as a broad critical-theoretical analysis, engaging with academic concepts relating to social, cultural and aesthetic communities. The paper outlines and discusses visual techniques evident in problematic representations of women in mainstream approaches in Western consumer media. Amongst other things, body language, physical perfection, commodification, and sexual objectification are discussed. The implications of problematic portrayals of women are considered in general, and more specifically within the sociocultural context of South Africa.

The aim of the research is to argue against harmful media portrayals of women and to consider the visual communication industry's complicity in the problem, as well as its power to correct it.
Keywords: *visual portrayal, women, consumer media, stereotypes*

Introduction

Every day, women are presented with a myriad of consumer images, which compete for attention in the visual media landscape in South Africa. Following standards set by global markets, female models are groomed, posed, styled, and art-directed, and their pictures are manipulated and retouched, to generate 'ideal' representations of how a woman should look, act, and 'be'. These mainstream consumer images that appear in magazines, on billboards and television exist as constructed endorsements of 'femininity' that reflect perceptions and set standards for the ideals of beauty, success and sexuality for women. Of concern, as this

paper aims to outline, is that these consumer representations seem to perpetuate misogynistic notions of women as 'silly', submissive, vulnerable, inferior, 'decorative' and/or as sex-objects, in contrast to men, who are typically depicted as intelligent, serious, confident, authoritative, dominant, assertive and impervious[iv].

An extensive amount of critical research has been done on the topic of problematic portrayals of women in media images. Significant here, is to provide a broad overview of common recurring themes from literature, and to discuss the implications within the particular South African context. These themes are: 'Feminine touch', 'Function ranking', 'The ritualisation of subordination', 'Licensed withdrawal', 'Idealised beauty and physical perfection', and 'Sexual objectification and violence'[v].
Problematic motifs

Feminine touch

'Feminine touch' manifests in images where women are pictured using their hands in 'decorative' ways to touch, outline, or caress objects and products (Tylka & Calogero 2011, p. 466 following Jhally 2009; Goffman 1979, pp. 29-31). The idea of feminine 'decorative' touching is evident in the way female models are depicted touching their own bodies and 'reinforcing the stereotype of woman as the center of pleasure and calling attention to the body itself' (Schroeder & Borgerson 1998, p. 173). The product-handling evident in Figure 1, as well as the self-touching in Figures 2 and 3, are examples that also suggest sexualised expression.

Figure 1. Coco Chanel (2011)

Figure 2. Guess Seductive (2012)

Figure 3. Beauty Marie Claire (2013)

Function ranking

'Function ranking' is a gendered visual approach prevalent in consumer images, where men are represented as 'active', performing important tasks, or participating in high-ranking occupational roles, in contrast to women, who are depicted as passive or in supportive roles (Goffman 1979, pp. 32-36). Women are often depicted as 'decorative' and passive, with the focus on their physical attributes, rather than their skill or intellect (Morna & Ndlovu 2007, p. 36; Mager & Helgeson 2011, p. 249) (see Figure 4 & 5).

This contemporary type of 'function ranking' is also prevalent in sport images in South Africa, where young skimpily dressed female cheerleaders, are depicted on the sidelines of sports fields, applauding and dancing to encourage predominantly male athletes, who are the centre of the 'serious' activity. Figure 6 shows a South African Sharks cheerleader on the field during a rugby match – ostensibly valued for her 'decorative' attributes rather than for her skill in sport.

Figure 4. Cosmopolitan (2013)

Figure 5. Givenchy (2013)

Figure 6. Sharks (2010)

The ritualisation of subordination

Male 'authority' over female 'submission' can be staged via the relative placement of figures in the image frame and via body language (Goffman 1979, pp. 40-56; Mager & Helgeson 2011, p. 249). When women are depicted lying down in images, it invokes symbolic deference or submission, and in instances involving the floor, a couch, or a bed, sexual availability may also be inferred (see Figure 7) (Goffman 1979, p. 41; Morna & Ndlovu 2007, p. 43).

Other indications of submissiveness involve body language, such as canting postures, where the knee, the body, or the head is bent, and which can convey ingratiation, compliance, and acquiescence (Tylka & Calogero 2011, p. 466 following Jhally 2009). Smiling can be read as body language of appeasement, signalling that no hostility is intended. The canting body language and smile of the fashion model in Figure 8 subtly demonstrates this type of ingratiating expression.

Infantilised representations, where women are depicted in childlike ways, similarly imply that women are not equipped with the emotional and physical abilities, intellect, and 'agency' required to deal with the strenuous realities of everyday life and are in need of male protection and guidance (Goffman 1979, pp. 5, 51; Tylka & Calogero 2011, p. 466 following Jhally 2009). Figure 9 shows how an infantilised approach has been taken a step further, where the models' poses and body language depict women as inert, as puppets, without 'agency'.

Visual representations of women as inferior and receiving support have actually increased in contemporary advertising images (Mager & Helgeson 2011, p. 249). In Figure 10, the male model (David Beckham) is in a position of authority, standing straight and confident, looking straight at the audience and embracing the female model around the buttocks in a way that suggests sexual possessiveness, while the female model, in contrast, leans into him submissively.

Figure 7. Guess (2012)

Figure 8. Journey (2012)

Figure 9. Edgars Club (2013)

Figure 10. Intimately Beckham (2011)

Licensed withdrawal

'Licensed withdrawal' is where women are portrayed as present in body but not in mind, withdrawn, as such, from a situation (Tylka & Calogero 2011, p. 466 following Jhally 2009; Mager & Helgeson 2011, p. 249). When women are depicted as hiding their faces, or closing their eyes, in an attempt to conceal emotion, or as gazing off into the distance in a type of mental daydream, it suggest that they are not psychologically or emotionally present or 'active' in the moment (see Figures 11-13). These representations can imply vulnerability and dependence on others (Tylka & Calogero 2011, p. 466 following Jhally 2009). Consider the lack of eye contact from the female model compared to the 'directed' male gaze in Figure 10.

When models (participants) in an image do not make eye contact with the audience, 'it "offers" the represented participants to the viewer as items of information, objects of contemplation, impersonally, as though they were specimens in a display case' (Kress & Van Leeuwen 1996, p. 119). In contrast, when a model is represented with a commanding gaze directed at the viewer (as in Figure 10) 'the participant's gaze (and the gesture, if present) demands something from the viewer, demands that the viewer enter into some kind of imaginary relation with him or her' (Kress & Van Leeuwen 1996, p. 118). Interestingly, when female models make deliberate eye contact with the viewer it is often staged in a way that suggests sexualised expression (see Figures 1, 2 & 7).

Figure 11. In-store advertising (2013)

Figure 12. Valentine's Day hell (2013)

Figure 13. Marie Claire (2013)

Gestures such as sucking or biting (also sexually evocative), covering one's face or part thereof (see Figure 12), head and gaze aversion, daydreaming, gazing off into the distance, and preoccupation with seemingly trivial things (a shoe or glasses for instance) are all forms of 'licensed withdrawal' – expressing disconnection, compliance and submission. In these type of depictions the model is 'on offer' to the viewer (see Figure 13).

Idealised beauty and physical 'perfection'

Contemporary consumer culture has created a hegemonic 'image' of idealised feminine beauty. Notions of what constitutes beauty are based on a narrow Western consumer definition of physical perfection, slenderness and youth (Sanger 2009, p. 140) and reinforce the notion of women as 'decorative' – as objects for the 'male gaze' (Mager & Helgeson 2011, p. 248).

The pervasive portrayal of feminine physical 'perfection' has become disturbing in its ever-increasing extension of boundaries and its disregard for physical limitations, in part brought about by digital image enhancement tools. The sheer volume of digitally enhanced 'perfect' representations of women sends a message that physical perfection is what matters. This 'perfect' ideal is of course unattainable in reality for most. Firstly, models are selected against highly stringent criteria (including body type, height and weight) and makeup artists, lighting, photographic and digital retouching techniques are employed to mask 'age' and imperfections and to generate the 'perfect' look.

Digital enhancement techniques that make women's heads and eyes larger, and bodies smaller (an approach often employed in consumer images) present women as infantilised, physically 'immaterial', weak, and vulnerable. In contrast, common masculine representations, suggest power, strength, and authority. See Figure 14, from the *Marie Claire* 'Love your body' issue (notice the irony in the title), showcasing typically thin models[vi].

Figure 14. Marie Claire (2011)

Sexual objectification and violence

With the appropriation of feminist discourse that celebrates women's sexual agency into consumer and popular media, the image of a strong, confident, and sexually independent woman has becomes commercially aspirational – an ideal model of 'woman' to sell to women and men (Niblock 2000, p. 302). In addition, increased relaxing of media regulation and censorship, allow explicit sexual, even 'pornographic', approaches to become acceptable, and even fashionable, within mainstream media (McNair 2002). Nudity, whether suggested or actual, is often used in consumer images to present the female form (ostensibly as a celebration of beauty) for the visual gratification of the male spectator – for the 'male gaze' (Schroeder & Borgerson 1998, p. 169). Figure 15 depicts a Tom Ford 'for Men' fragrance advertisement that has been banned in some countries for its explicit use of sexualised imagery.

Common objectifying approaches include using various techniques to draw attention away from the head to the body (such as cropping women's heads out of the visual frame), 'dismembering' the body by only showing only parts thereof, and any form of symbolic silencing. When a woman's head is made less significant, or removed from an image, the core of her identity, personality, and intellect is removed, thereby relegating her to an 'object' (Schroeder & Borgerson 1998, pp. 177-178; Kilbourne 1999, p. 258). See Figure 16, where women's breasts are compared with Mercedes-Benz airbags.

In Figure 17, an advertisement for BMW Premium Selection Used Cars, a young girl is depicted from the neck up, lying down (by implication nude), gazing at the viewer suggestively, touching her face and neck. The text reads, 'You know you're not the first', 'BMW Premium Selection, Used Cars', and 'Sheer Driving Pleasure'. An analogy is implied between the girl's youthful beauty and lack of sexual innocence and the used status of the luxury vehicles advertised. The advertisers rely on the girl's sexual appeal to generate appeal for their product.

Figure 15. Tom Ford for Men (2007)

Figure 17. Mercedes-Benz (2008)

Figure 17. BMW Premium Selection Used Cars (2010)

In a disturbing manner, sexual objectification of women has assumed a sinister guise, as images of violence and sexual violence against women become apparent in consumer media (Capella, Hill, Rapp & Kees 2010, Kilbourne 1999, p. 278). Figure 18, an advertisement for the high-end fashion brand Dolce & Gabbana, uses the insinuation of violent sex to sell their products[vii]. These types of images constitute a symbolic violence that, when one considers that images possess discursive power, may be destructive at a level that goes beyond the illusory. Pervasive sexualisation and objectification of women – 'viewing women as exclusively sexual beings whose purpose is to sexually arouse and gratify men' – creates a shift in power where women can be perceived as 'appropriate targets' for sexual aggression (Capella, Hill, Rapp & Kees 2010, p. 37).

Figure 18. Dolce & Gabbana (2008)

Discussion

In summary, common problematic representations of women in the mainstream Western consumer media idiom include:

1. The princess myth: representing women as passive, weak and lacking in agency, and thus in need of mental, physical and emotional support and leadership from men.
2. The beauty myth: representing women in ways that reproduce a stereotyped Western definition of female 'beauty' as physical perfection, youthfulness and slenderness.
3. Sexual objectification: representing women as 'decorative' and as 'sex objects' to gratify men's pleasure.

The princess myth

The subtle ways in which women are portrayed in contemporary consumer images, as passive, weak and delicate, reproduces a patriarchal fairy tale myth of the 'helpless princess waiting for the hero prince to rescue her' in contemporary visual form (see Brule 2008, p.72). These portrayals can function as a subtle form of visual propaganda that socialise South African woman into thinking of themselves as vulnerable, passive and submissive in relation to men, and also to act accordingly. In South Africa, issues of crucial concern are the 'coercive and violent nature of heterosexual relationships and the powerlessness of young girls/women', as well as 'more adherence to traditional versions of masculinity and femininity and less evidence of feminist resistance to male power' (Shefer & Foster 2001, p. 385). Similarly, it seems that with reference to adolescents, 'boys seem to have more power in leadership-type roles than the girls, who are ascribed more passive roles'. As a result (Gevers, Jewkes, Mathews & Flisher 2012, p. 1134):

> This inequity is potentially highly problematic as girls have little agency or confidence in creating a relationship they want and are comfortable in, and they are often left feeling hurt or disillusioned by relationship experiences. At the extreme, girls are left vulnerable to abuse

Balanced portrayals and representations of women (and men) that do justice to the wide array of diverse gender attributes that exist in reality, rather than perpetuating binary oppositions and/or hegemonic stereotyped heteronormative ideals of masculine and feminine, may go a long way in contributing constructively towards developing better self-perceptions and agency in young girls and women.

The beauty myth

The rise of consumer culture in South Africa has played a significant role in mediating identities and in constructing consumer-endorsed ideas about beauty. Of particular relevance is the influence of media images aimed at a newly emergent black consumer class. Narunsky-Laden (2008, p.143 comments that 'mass media in post-apartheid South Africa grant black South Africans access to a vast 'marketplace' of global and local commodities, routines, linguistic practices, identities and aspirations, both trivial and esteemed, and motivate them to be actively participant in manufacturing the new fabric of their everyday lives'. However, the intersection (and/or conflict) between local and global discourses of media and culture can sometimes challenge individual and collective identities in negative ways.

The highest increase in anorexia is among young African girls in South Africa, 'who increasingly see themselves through western [sic] discourses that valorise thinness, and reject more traditional approaches to female ideals that encourage an ample female figure as a marker of health and prosperity' (Steyn & Van Zyl 2009, p. 6). Similarly, some South African women's magazines engender narrow Western ideals of youth, slenderness and beauty, as 'female models are slim, with long, straight or straightened hair' and 'lighter-skinned black women are often presented as preferred presentations of feminine beauty' (Sanger 2009, p. 139). These representations relegate the diverse attributes of South African women, including different body types, weight, age, hair textures[viii] and ethnicities. Media images that perpetuate a hegemonic Western discourse of beauty can 'other' or alienate young girls and women in South Africa and clash with the democratic and inclusive principles that are fundamental in constituting a cohesive South African society.

Sexual objectification

Post 1994, lenient censorship laws and the legalising of adult pornography, has allowed for more explicitly sexual visuals in mainstream media in South Africa (Posel 2004, p. 53). 'Soft porn' visual approaches are evident in contemporary 'lad magazines', such as *GQ, Men's Health* and *FHM,* which feature women in hyper-sexualised and objectifying ways. As a form of 'laddism', these types of visual approaches can be regarded as 'a backlash' against feminist values, which 'seeks to return female representation to a more subordinate and traditional sexist stereotypy' (Rizos 2012, p. 40). 'Lad magazines' do not endeavour for authentic representations of female sexuality. Instead, female sexuality is constituted via a male heteronormative sexual fantasy, where the 'female body is often regarded as ornamental, and in the context of pornography, [for] men's amusement, to be stared at, to be acquired and to be possessed' (Rizos 2012, p.41). In this way, a sexist version of female sexuality is exploited for commercial gain. Viljoen (2008, p. 326) explains how consumer commodities are juxtaposed with images of objectified and sexualised women, referring specifically to the way GQ magazine 'fluently couples saucy pin-ups with upmarket advertisements (Mercedes, Tag Heur, Armani), and in so doing sexualises materialism'.

The commodification of sexuality not only manifests in visual consumer media, but also is transferred in some of the 'lived experiences' in South Africa. It seems that some young people in Cape Town inscribe relationships, dating, and sex in terms of commodity value (Bray, Gooskens, Kahn, Moses & Seekings 2010, pp. 268-269). And, some young women engage in 'transactional sex' and enter into relationships with men who have economic means, as a way of acquiring 'gifts' or 'luxury' consumer commodities, such as perfume or cell phones (Hunter 2002, p. 101; Leclerc-Madlala 2004, p. 2). Posel (2004, p. 56) explains as follows the role that sex plays:

> For large numbers of young women, sex is often the indispensable vehicle for consumption. In midst of powerful hankerings for designer products, sex is often the condition of their acquisition. Sex is also the object of consumption, in a genre of popular culture which eroticises possession and accumulation as icons of sexual prowess and libido […] For young men with aspirations to macho status, an expensive car and flashy, designer clothing have become signifiers of their sexual bravado as 'men in control', with the power to command multiple sexual partners […] Sex is consumed, at the same time as consumption is sexualized, in ways which mark the engagement of popular culture in South Africa with more global cultural repertoires of sex.

Despite South Africa's Constitution (Act 108 of 1996) that recognises gender equality as a fundamental human right, a disturbingly high incidence of gender violence and rape has been documented in the country (Dosekun, 2007, p. 89). Shefer and Foster (2001, p.385) suggest that patriarchy is deeply entrenched in South Africa and crosses boundaries of race and class. The urgency of the historic struggle against apartheid has meant that feminist issues have not been at the forefront of concern, and thus 'the space for a clear feminist agenda has only been opened up by the contemporary period of transition' (Shefer & Foster 2001, p.385). And, while we 'prescribe' gender equality on paper in South Africa, 'old' and new versions of misogynist ideas and imagery perpetuate. Legislative empowerment of women simply does not seem to be able to push through into everyday reality. Instead, overwhelming evidence suggests that 'South African women are not empowered: the rape and other gender based violence statistics, the rampant sexual harassment at work and public spaces, the siege on Black lesbians and raging homophobia, the very public and relentless circulation of misogynist imagery, metaphors and language' (Gqola 2007, p.116).

While it would be a gross oversimplification to draw direct parallels between demeaning images of women and instances of gender based violence and/or gender inequality in South Africa, one has to concede that they do serve to intensify the problem instead of addressing it.

Conclusion

Consumer images play an important discursive role in mediating identity, shaping people's sense of who they are and how they should interact with one another. Considering the various negative ways in which women are portrayed in consumer media, as this paper has outlined, it should be clear that South African media industries have the capacity to play a more constructive role in the positive modelling of gendered identities and behaviour. Similarly, visual communication education, involving graphic design, photography, and art-direction, has a responsibility to advocate critical approaches, to evaluate the role that visual media representations play in shaping identity, and to work towards constructive visual practices. Addressing the issue is certainly not uncomplicated, as it involves widespread and deeply entrenched ideas about identity, consumption, 'progress', globalisation, and gender and cultural paradigms.

Solutions do not involve censorship or a return to conservatism. As a first step approach, awareness and sensitivity is key – balanced and diverse approaches to gender representation are necessary, ones that speak to the complicated realities in South Africa and that go beyond heteronormative masculine and feminine stereotypes. In terms of visual ethics, a sensitive understanding of the discursive functioning of images needs to be continually fostered and students need to acquire the necessary skills and knowledge to not only construct persuasive consumer images, but also to analyse and understand the impact that images have on individuals and society. Importantly, students need to understand that working with images is less about following styling and visual trends, and rather about visual communication. Media and cultural studies that include modules on gender representation are important components for inclusion in a visual communication curriculum, together with tools for visual analysis, such as semiotics.

Students, as future professionals in the visual communication industry, need to understand and appreciate the important role that they play in mediating identity, and ultimately shaping the way people think, feel, and act. As Bornman (2003, p. 44) suggests: 'In the years to come the identity needs of South Africans will have to be seriously considered if the South African institutions associated with the media and communication are serious about developing people-centred policies'.

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FAILING SCHOOLS IN SOUTH AFRICA: A SYMPTOM OF DEFEATISM IN SCHOOL LEADERSHIP

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Abstract

This paper draws on a multiple case study on school leadership in seven schools in South Africa. The views and experiences of principals of so called failing schools were elicited and analysed to try and answer the research question: Why could these schools not achieve more than a 20% pass rate in the National Examination for the last five years amongst their grade 12 pupils? The most striking finding was that in all the cases one essential element of leadership was missing namely resilience: leading irrespective of the circumstances and changing problems into challenges. In their acceptance of a managerialist leadership style and curriculum changes that, amongst others, marginalised design/art education, school leaders surrendered to defeatism, a finding validated by interview data. This paper recommends suggestions which principals could use to turn defeatism into resilience in their professional lives.
Keywords*: Leadership, Principals, Resilience/Defeatism*

Introduction

In an effort to contextualise the content of this paper, I endeavoured to unpack the notion of design/design education. Acts and Policies chose *arts education* as a term to unify the multifaceted *Arts and Culture* sectors which include design, and following this approach, 'arts education' used in this paper subsumes 'design education'. To me the concept *design* embodies three interconnected ideas namely to imagine (think/conceive), design and create.

This study is delimited in the sense that the focus is not on design education/thinking in Higher Education (HE), but the perceived lack of resilience in school leaders/principals and the influence of this behaviour on students' performance, development and choices at school that impacts on career choices and studies in HE.

The focus of this paper is the perceived lack of resilience in school leaders. It infers that a culture of defeatism in our school system is a product of the post 1994 South African Schools Act (84/1996) (SASA), the National Education Policy Act (27/1996) (NEPA) and a diminished capacity in principals as school leaders to think and lead creatively. The paper implies that, although the resourceful and innovative value of arts education is recognised in industry, it is marginalised in the national curriculum, linking directly to poor school leadership. It suggests that, in accepting the existing status quo, principals and school management teams (SMTs) relinquish their spirit and resilience to feelings of gloom and hopelessness due to government pressure.

It assumes that principals' despondency, perceived lack of support and unwillingness to change challenges into opportunities, relate to the top-down enforcement of these rather obsolete policies, demand-and-control managerialist leadership styles and a lack of autonomy. Inclusively these create a rather morbid education situation that shackles creative leadership development potential and limits pupils' immediate career choices and subsequent future successes.

To obtain data for this research, a literature study was done and principals from failing schools were interviewed. Their experiences served to support and validate the claims made in this paper. An alternative to the managerialist discourse is suggested and the impact of defeatism versus resilience on school leadership is considered. Suggestions are made as to how resilience in leadership could turn failing schools around.

Background

In 1996, both SASA (84/1996) and NEPA (27/1996) were promulgated. Together these Acts were to form the basis of a high performing post-apartheid education system that should steer the education and transformational requirements of the country and be considered accessible and equitable. In an effort to move away from the content-based apartheid curriculum, the education system was radically reformed to focus on an outcomes-based learner-centred acquisition of skills, knowledge and values for development, equality and social justice. Reality shows that actual progress in education has been sketchy since then. SASA (84/1996) addresses mainly funding and governance, skimping on key issues such as teaching, pupil outcomes and leadership/management. This oversight in legislation resulted in a troubling, failing education system. Curriculum 2005, implemented in 1997, was replaced by a watered-down version, the Revised National Curriculum Statement in 2004 which was amended to Curriculum and Assessment Policy Statements in 2012 (Western Cape Education Department 2013). Such rapid changes could only have been necessitated by intrinsic and deep-rooted flaws in the system, culminating in a feeling of despair among educators, pupils and parents nationally.

Arts education was primarily offered in urban white schools in the historical four provinces until the late 1980's. It is accepted that creative activities simultaneously stimulate both sides of the brain maximising learning and information retention. Rural schools' education was underfunded, in bad physical shape and qualified art teachers were scarce. This is still the case. Current arts education is further undermined by changes to the curriculum with a shift in focus to maths and sciences. This shift towards the sciences is believed to augment global competitiveness and economic growth. Unfortunately, arts education does not lend itself to quantifiable measurements and is all too easily considered dispensable and unworthy of the same attention bestowed on so-called higher-order thinking subjects such as maths and science. Principals accepted these changes and arts classes are frequently the first to erode from a crowded curriculum. Aspects that are considered peripheral in education are actually those that commonly lend value and credence to an education system and its practitioners.

As stated in the Arts and Culture Policy Review (2007), despite SASA's commitment to a balanced curriculum, arts education remains largely neglected in the school curriculum. Echoing 1996, most schools still lack the basic infrastructure and *trained* human resources to offer arts and culture. Barriers to information access and educator development opportunities that require the integration of multidisciplinary knowledge and skills/multiple arts disciplines mean that access to and investment in *certified*, *accredited* arts education remain unavailable to the majority of South Africans. Local sources are inadequate to meet the capacity building demands of a fragmented, growing arts and design sector.

Since the promulgation and subsequent amendments of the Green and White Papers, Bills and Acts, meaningful changes in curricula remain conspicuously invisible in schools. Despite the emphasis on maths and science teaching, the World Economic Forum's Global Information Technology Report (2013) positions South Africa's maths and science education second last worldwide, ranking 143/144. These ratings rank the quality of South Africa's education system as amongst the poorest performing in the world: 140/144. This dismal situation is directly related to the fact that SASA and NEPA were largely results of ideological, emotional and political compromise, and not aimed at enriching and transforming our education system. Regardless of the rankings and notwithstanding the fact that business globally values a culture of arts and design, the South

African school system still advances maths and science while arts education remains irrelevant in most schools' curricula.

South Africa (SA) is globally considered a manufacturing country of others' ideas (GEF 2013). This status quo will remain unchallenged and unchanged unless consumer markets nationally challenge education and industry to expand the level of innovation and design to generate quality services and products. Education does not happen where policies are made, it happens in schools between and amongst teachers and pupils. Education is not about pupils conforming to or about comparing their performance rates on a very narrow achievement continuum; it is about the diverse human nature and the holistic development of pupils.

The recent history of school improvement in SA has been written with references to Parliamentary Acts and Provincial Regulations (Cross et al. 2010; Bisschoff 2009). It is generally assumed that politicians steer educational improvement in SA. The truth is entirely different (Bisschoff 2009). For generations educational progress in SA was driven by teachers and especially principals. Teachers pioneered and redefined excellence in education (Moloi 2010; Moloi et al. 2009). The reformers who consistently raised our expectations of what education can achieve were mostly principals (Moloi 2005). This perspective clearly indicates that government should actively strive to make a difference in schools - and pupils' lives - by granting 'autonomy' to competent principals. The present managerialist discourse (Mabey & Finch-Lees 2008:189) holds interested parties hostage in thinking in a hierarchical top-down, command-and-control frame. SASA shaped the policy and attempted to bring greater autonomy to schools and principals, but evidence of this remains undetectable at the majority of schools.

Evidence from other countries (Canada: Bosetti 2011; USA: Hill 2006; Singapore: Mok 2003) proves that empowered principals can indeed exceed their own expectations and that of the system. The highest-performing education systems are those where the government knows when to step back and let principals manage their schools.

Ken Robinson, well-known advocate for transformation in the culture of education, argues that 'the real role of leadership in education… is not and should not be command and control. The real role in leadership is climate control, creating a climate of possibility' (online:2013). The education system impacts directly on students' teaching and learning experiences, their development and future. In SA, students from affluent schools will still prosper while those from struggling schools continue to be subjected to insufficient choices, limited curricula, infrastructure shortage, menial teaching and learning experiences. Until the notion of *defeatism* is supplanted by *resilience* and *autonomy* in school leadership, giving principals and their SMTs a voice to be respected and reckoned with, equitable and fair teaching and learning activities in schools could remain a paper exercise.

This study is important precisely because of the pivotal role principals play in learner and school success. The questions asked in this paper are why these seven schools' grade 12 pupils could not achieve more than a 20% pass rate in the National Examination for the last five years and how this problem can be addressed?

Literature review

The literature subsumes the elements explored in this study: leadership, resilience and defeatism. Apart from Luthans and Avolio (2003) and Sutcliffe and Vogus (2003) very little empirical research directly links resilience to leadership. These researchers argue that the development of resilience as component of authentic leadership increases the effectiveness of organisations. Leaders feel inadequate and stressed because of the difference between their ideal persona, who they are and what they achieve. Bass (1996:45) maintains resilient leaders would transform emergencies into developmental challenges by treating challenges as

surmountable and by providing 'intellectual stimulation' to promote thoughtful, creative rather than flimsy, untrustworthy solutions to stressful conditions.

Resilience: a necessary condition for effective leadership

According to Henderson (2003) and Davies (2013) people's unique innate capacity to overcome adversity is shaped and fortified over time by talent/internal strengths and undesirable environmental conditions. Stressful factors seem to boost the manifestation of resilience, a characteristic that varies between individuals and fluctuates over time.

For the purpose of this research the concept *defeatism* was chosen as antonym for resilience, as 'a lack of resilience' does not emphasise forcefully enough the urgent need for resilience as a theme in school leadership development. The definitions below contribute to a fuller understanding of resilience in school leadership with defeatism labelled as its counterpoint:

According to Richardson (2002:313) 'resilience means growth or adaptation through disruption rather than just to recover or bounce back', while Youssef & Luthans (2007:6) infer that 'resilience allows for not only reactive recovery but also proactive learning and growth through conquering challenges'. Van der Kleij et al. (2011:1) argue that '…resilience is the ability …to respond to sudden, unanticipated demands for performance quickly and with minimum decrement of performance.'

School leadership

Literature on leadership is abundant, wide-ranging and highly fragmented. There is no overarching theory of school leadership and relatively limited empirical work has been done to date. Given the paucity of an evidence base, it is challenging to know where to begin when attempting to explain the 'why' and 'how' in the research question for this paper. Although it is argued that leadership theory is fragmented and atomised, the influence of 'managerialism' over leadership theory and practice is widely recognised in the form of transactional leadership (Clarke & Newman 1997, Clegg 1990). Unfortunately, managerialist discourses do not provide the conceptual frame for the leadership competencies required to combat a lack of resilience within leadership of place. Leadership of place that fosters the development of resilience (Bennis & Nanus 1997, Trickett 2011; Riley 2013) promotes co-operation built on trust-based networks where trust embraces inclusivity, openness and equitability to generate and share knowledge.

Studies on failing schools (Murphy 2009, Grobler et al. 2012) mention a number of leadership features within failing schools, but very little empirical data is available to assist principals in turning their schools around. Conceptual misunderstanding and an alarming number of quick-fix solutions abound, many which leap from the problem (reasons for failure) straight into solutions which are not thought through thus not exploring the variables and conditions within failing schools.

Available literature clearly indicates that the influence that principals have on pupil outcomes (the core function of schools) is largely mediated through factors such as work done by teachers, involvement of parents and the community and governance. Shared leadership is considered more likely to have an effect on the positive achievement of pupil outcomes than leadership which is largely, or exclusively, top-down. Leithwood, Harris & Hopkins (2008) investigated the impact of school leadership on pupil learning outcomes and coined seven strong claims about successful school leadership which support the message of this paper. This study clearly examined the last claim 'a small handful of personal traits explain a high proportion of the variation in leadership effectiveness' and concluded that resilience is a fundamental trait for principals to succeed in challenging circumstances.

Research design

The study followed a qualitative, exploratory and descriptive research design in the humanistic tradition (Gunter & Ribbins 2001) but with a specific modern day pragmatic slant (Biesta and Burbules 2003, Cherryholmes 1992, Rorty 1982). The study was undertaken within an interpretative framework, emphasising experiences and interpretations. From a list of 100 secondary schools received from a district manager in a specific school district, ten schools which consistently performed the poorest over the last five years were identified for the purpose of this research. The project leader received documentary evidence and permission to interview the ten principals. Only seven principals agreed to be individually interviewed by eight researchers working in pairs. The aim of the personal, in-depth interviews was to elicit principals' experiences and views on the linkage between governance/leadership/management and pupil achievement. The interview protocol was developed using existing knowledge about failing schools which focussed on school improvement via structural and school related factors instead of principals' characteristics. Qualitative content analysis was used to analyse the transcribed interviews.

Validation strategies used included first investigator triangulation and rich, thick descriptions that allow the reader to make decisions regarding the transferability of the findings (Creswell, 2007). Triangulation of data ensured trustworthiness. The main categories were recorded with specific quotes from the transcribed interviews to substantiate the claims made.

Interview questions (IQ) were developed to obtain principals' views on why they think their schools are failing. It was difficult to develop questions that would illicit direct and honest answers and give principals ample time to elaborate on their answers. These questions may look like questions on the school and its structure, but the way in which principals answered these questions gave researchers opportunity to glean characteristics of the principals themselves.

The interview protocol consisted of the following IQs:
IQ1: Tell me about any successes your school has achieved in the last five years. (Encourage academic successes; listen to other achievements such as sport/culture)
IQ2: Tell me more about your School Governing Body (SGB) and what it does for you as principal and your SMT. (How does the SGB contribute to enhance learner performance/effective teaching and learning in your school?)
IQ3: Would you like to see other people in the community become involved in the governance of your school? (If the participant is in favour of more involvement try to find out what role s/he would like others to play)
IQ4: If you could advise the minister of education on SGBs, who would you like to see represented on it and what would you like them to do? (Try to find out how participants would like to restructure the SGB if they had the power)

Findings and discussion

First level of analysis

This section highlights what was said relative to the four interview questions:

IQ: school successes

Principals painted a picture of optimism and highlighted some of the good things in their schools. The principals were aware of the increased importance of pupil well-being in general as part of school success and

mentioned achievements such as reduction in drug abuse and teenage pregnancies. One school excelled when pupils built a model car sponsored by a car manufacturer. Understandably very little was said about pupils' academic achievement although one principal mentioned that there was a significant improvement in the results in the grade 12 examination; this was true but the school still fell within the sample category.

IQ2: the role of the SGB

SASA (1996) makes provision for five constituencies (categories of people to vote democratically for their representatives) on the SGB. The principals only referred to three of these constituencies: educators, parents and learner representatives.

On the role of educators they emphasised that teacher unions undermine the authority of the school principal and support unprofessional behaviour of educators. They fatalistically stated that nothing could be done about this status quo. One principal said that *as long as Union A exists my school will not be able to perform successfully.*

Principals agreed that parents are not involved and could play a much more constructive role in sport activities and fundraising. Again a feeling of defeatism suggested that very little can be done about it because *parents are illiterate*; *parents work all day* and *parents don't* see the importance of education.

The principals felt that the contribution of the learner representatives are not constructive and national student politics sometimes undermine the constructive work done by SMTs. The perceived inability to do something about it was evident in the comment *We are told by Student Association A when to go on strike even if no reason for the strike exists.*

IQ3: other representatives on the SGB

The principals were unanimous in their wish to have more knowledgeable people on the SGB especially in the fields of finance and legal matters. They agreed that the present co-option avenue is unsatisfactory because it does not guarantee commitment from members. SASA (1996) allows for any person to be co-opted onto the SGB but in the majority of cases without voting rights or the possibility to chair a subcommittee of the SGB.

IQ4: please mister minister

All the principals agreed poverty is rife within their school communities. They dejectedly accepted poverty as a given about which nothing could be done, using it as an excuse why their pupils can never achieve as well as or better than the district average. They referred to perks SGBs of successful schools pay their principals to justify why they should get more money for working under difficult circumstances beyond their control. The principals blamed their teachers for the weak performance of their pupils. One principal even emphasised that he wanted his teachers replaced by a new hardworking group of teachers *otherwise I can see no improvement.*

Second level of analysis

A brief summary is provided denoting a set of patterns that emerged from the second or deep level of analysis. These could be seen as components or even counterpoint components of resilience in leadership. It was during this analysis that the theme of lack of resilience emerged from the data.

Declining job satisfaction and detachment in an unsupportive environment

One principal came from a historically white school where he served as a deputy; he has been with his current school for five years. He felt that his experience and knowledge gained at a white school could add value amongst his own where he could, ideologically, increase the opportunities of children from a poor socio-

economic context. Having experienced some unpleasant incidents with parents and teachers, he admitted that he felt a little depressed because of the lack of parental and teacher support. He felt it was unfair that he put in so much energy into the school while nobody else seemed to pull their weight: *I work late and do not find enough time for shopping, washing, etc while the staff take a half day on payday to do their shopping because as they say it is a tradition in that school.* The other principals indicated that *they were not happy with the job as principal… but would never give up the job because it pays well.*

Support and recognition – shoots of optimism

The principals viewed the involvement of the Department as intrusive and judgmental. One principal indicated that when his school won a private sector initiated project he at last experienced some recognition and that made him more optimistic about the future of the school. His optimism was short lived because peers criticised this as a *non-academic achievement* heavily funded from outside. The other principals felt that they received very little support and recognition for their hard work done under challenging circumstances. The transcripts are full of statements like the following:
We are known as the poor school with lazy teachers and parents take their children to the town school. The department blames me for the poor performance but one man cannot improve the results of the whole school.

Thriving or expiring against all odds

One principal indicated that he is has seen some improvement from the day he arrived at the school. However, the majority felt that the teachers were all in their comfort zones and satisfied that the poor pupil performance was due to the low socio-economic context the pupils come from. Low pupil expectations are evident in the fact that the principals did not feel accountable for the pupils' performance, and the fact that their children attended school was good enough for the parents. The principals blamed the appalling pupil behaviour on parents not doing their job: *Why must we teach them good, manners if it is the responsibility of the parents?* They did not see how pupils and schools could ever thrive and perform well in such challenging situations.

Variations in resilience across own professional life

From the information provided by the principals there was no indication that there were any variations in resilience. They agreed that they have to accept what was given to them and although it would affect their professional lives detrimentally they couldn't do anything about it. They were happy with the security attached to their positions as principals but wanted more money.

Meeting the challenge of the environment and utilising leadership of place

In this study, changing expectations about schools and the composition of the pupil population are key environmental factors that challenge principals' sense of effectiveness and well-being. All the principals come from limiting socio-economic working class backgrounds. According to Henderson's research (2003) under adverse circumstances the principals should have been well prepared to unequivocally deal with challenging situations in their professional lives. It appears that this is not the case, as seen in the following verbatim comment made by one of the principals when he voiced what they all concurred on:

> *I went to university to get a degree so that I can have a well paid work that did not demand hard work because it is uneducated people that must work hard not those that have studied, why would one then go to all the effort to study?*

During the interviews and the analysis of interview data, very little evidence was found to show that the principals' immediate environmental conditions and stressors contributed to shifting the balance of their responses from one of resignation and defeatism to resiliency.

Managerialism and resilience

The principals all felt that they were doing their best as managers and leaders, but that they did not know how to turn their schools around because their teachers and communities neither acknowledged nor supported their efforts; they appeared to be functioning in a void. It seems that the managerialist discourse on leadership no longer adequately provides a framework for understanding the lack of resilience in a leadership of place. Grint (2005) talks about the complexity of organisations/schools and label them 'wicket issues' that are intangible and too complicated for bureaucratic leaderships to grapple with because of the difficulty in identifying the root causes of unfamiliar complexities. Only by moving beyond this dominant command-and-control leadership discourse and by embracing the principles of place-based leadership, may leaders become empowered to move out of a role of defeatism into a role of resilience. Schools function within the knowledge-based economy where the production and dissemination of knowledge are drivers of productivity and growth and performance depends on how intangible assets such as skills, creativity and collective intellectual capital are applied to add value, reduce workplace barriers, create an entrepreneurial spirit and become a source of competitive advantage, pride and enriched human endeavour.

Conclusion

As is evident from this research, SASA and NEPA must be revisited in order to address the role of learner outcomes, teaching and greater autonomy in school leadership/management. The shift in the curriculum towards maths and science indicates a skewed managerial decision, emphasising the shortfall in school leaders' performance capacity. It is these shortfalls that risk further eradication of arts education from the curriculum.

The rate of change in education and the demands faced by principals are not slowing down, affording the ideal opportunity to change the current managerialist discourse to a place-based discourse where principals could lead with confidence and authority.

The information gleaned from the interviews with the principals confirmed that they felt disempowered to transform their failing schools into success stories. Without the support from the Department, parents and teachers they believed that they were set up for failure.

The above clearly underscores the need for resilience training to empower principals to *imagine* risks as successes, *design* challenges into opportunities and *create* order out of chaos, effectively leading schools from failure to success. It is high time that government addresses the deficits apparent in school leaders' leadership/management knowledge and skills and train and empower them to lead authoritatively and resiliently.

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VISUAL LITERACY IN COMMUNITY COMMUNICATION: PRE-TESTING NUTRITION EDUCATION MATERIALS FOR ELDERLY CARE GIVERS IN BOIPATONG

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Abstract

The paper deals with issues and concerns relating to the process of pre-testing visual illustrations used in educational material in a community communication setting. The first part of the paper discusses how selected aspects of nutrition education materials meant for elderly care givers in Boipatong were pre-tested using questionnaires (n=55) and focus group discussions in order to establish the target group's views and opinions about different types of visual illustration approaches. The information was subsequently used to guide the production of a visually illustrated nutrition education booklet, which was distributed free of charge in the community as part of a nutrition education intervention. The second part of the paper deals primarily with the focus group discussions, in which a total of 15 care-givers participated. The focus group discussions aimed to augment the questionnaire data, especially with regard to (a) the role of the visual images, (b) the comprehension of the visual messages, as well as (c) the appeal of the illustrations. Central themes in the focus group transcripts are that the visual component of the nutrition education materials plays a very important role and that the participants regard the nutrition education booklet as essential for their work as care givers. The findings confirm the importance of empirically pre-testing educational materials as thoroughly as possible in order to ensure a final product that meets the needs of the specific target community.
***Keywords**: visual literacy, community communication, empirical pre-testing, nutrition education intervention*

Introduction

The present paper discusses the process of pre-testing the visual illustrations of a nutrition education booklet developed for a group of elderly care givers in the Boipatong area of the Vaal region of South Africa. In the field of visual literacy research, pre-testing educational messages in a sample of the target community before they are disseminated on a large scale is considered a *sine qua non*. As elaborated on in the seminal writings of Mody (1991), Boeren (1994), Brouwer (1995) and many others, pre-testing typically involves providing members of the target group with a provisional version of the educational material and to invite their comments and opinions with a view to identify any possible barriers to effective communication. Pre-testing procedures fall into two broad categories, namely those that focus on the comprehension of the message, as opposed to those that concern the appeal of the message (Mody 1991, p. 197), even though in practice these two evaluation criteria are more often than not inextricably intertwined. The approach to pre-testing described in this paper focuses on the appropriateness of the visual illustrations. The term 'appropriateness' covers both comprehension and appeal, i.e. it includes the readability of a visual illustration in a particular target group, or the ease with which the audience comprehends the intended meaning on the one hand, as well as the extent to which the chosen illustration approach fits with the aesthetic preferences of the target community on the other hand.

The illustrated booklet formed an integral part of a nutrition intervention funded among others by the National Research Foundation and the Vaal University of Technology's Centre for Sustainable Livelihoods, which aimed to address food insecurity, pervasive malnutrition, as well as poor food purchasing and consumption patterns in Boipatong. The intention was to raise significantly the nutrition knowledge of the community members, especially the elderly care givers of young children, many of whom are orphans (Holeni 2013). A recent study conducted in this community showed that the nutrition knowledge of the care givers was inadequate, and that the previously disseminated nutrition education pamphlets recommended by the Department of Health were poorly understood and did not meet the community's needs (Holeni 2013, p. 163). It therefore soon became clear that additional, improved nutrition education material was required, and this led to the development of a visually illustrated booklet, which was distributed free of charge once it had been pre-tested and reworked where needed.

As argued in the remainder of the paper, the importance of empirically pre-testing educational illustrations as thoroughly as possible in order to ensure a final product that meets the needs of the target community cannot be overstated. This requires entering into a dialogue with members of the community about the visual signs to be included, and the manner in which they should be used. Such a dialogue may be conducted in a highly structured format, as is the case with questionnaires, by following a format which is more open in nature, as is the case with focus group discussions, or by using a combination of these, which is the approach that was adopted in this study.

Theoretical underpinnings

The two most important concepts from the visual literacy literature that guided the study are the notion of visual representational latitude (VRL) as described by Pauwels (2005), and the contractual axis of semiosis, which forms part of Johansen's semiotic pyramid model of dialogic semiosis (1993).

Firstly, the term visual representational latitude derives from a visual literacy framework that provides an overview of the main visual representational practices in science. Specifically, Pauwels describes VRL as 'coping with controlled and uncontrolled variations in the depicted and the depiction' (2005, p. 6), which links closely with the notions of vagueness and indeterminacy as applied to representational practices. Pauwels writes that 'visual representational latitude, therefore, is not just a producer's (or sender's) problem; that is, it is not just a matter of deciding how to express variation, of choosing the right level of iconicity or abstraction for a specific purpose. It is also a user's (or receiver's) problem: what kind of variation is to be expected in the real world, and which elements in this particular representation are 'motivated' by a perceived reality, and which others are due to specific, intentional or unintentional choices of the producer, limitations of the medium or larger production context?' (2005, p. 6). In the context of this study, a visual illustration with a narrow VRL is associated with a relatively stable meaning and a low degree of vagueness or indeterminacy, and is thus considered to be appropriate for a nutrition education setting. In contrast, an image with a wide VRL tends to give rise to an extensive range of possible interpretations and a high degree of uncertainty, and is likely to needlessly confuse the majority of the target group. Stated differently, appropriate visual illustrations are characterized by a high degree of universalisation, to use a term from Habermas' work in the area of discourse ethics (1998). The principle of universalization requires the acceptance (Zustimmung) of the communicative norms at play by all involved, implying both an agreement (Einverständnis) and a contract (Vereinbarung). In this regard, Habermas writes that 'only those norms can claim validity that could meet with the acceptance of all concerned in a practical discourse. ... A norm is valid when the foreseeable consequences and side effects of its general observance for the interests and value-orientations of each individual could be jointly accepted by all concerned without coercion' (Habermas 1998, p. 18). In the context of the present study, this suggests that the appropriateness of visual illustrations is primarily determined by the quality of the agreement reached between the producer of the visual illustrations and the members target community during a dialogue.

Secondly, the term contractual axis of semiosis comes from a model of dialogic semiosis by Johansen (1993). Dialogic semiosis refers to the exchange of meaning between two parties using signs, (Johansen 1993, Johansen & Larsen 2002). The key components of dialogic semiosis are the stipulable sign (equivalent to the term 'representamen' in the terminology used by Peirce), the semiotic other, the interpretant, the semiotic self, and the object experienced. These poles connect the axes of the semiotic pyramid, i.e. the indexical, symptomatic, taxonomic, perlocutionary, experiential, conventional, supposed conventional, informational and contractual axes, each of which deals with one particular component of the process of semiosis. In his model of dialogic semiosis, Johansen (1993, p. 254) also discusses the relationship between these axes, which form triangular planes of the pyramid, such as the communication plane, delimited by the symptomatic, perlocutionary and contractual axes. The semiotic pyramid model can thus be used to map out in considerable detail the main features of a dialogue between the producer of the draft visual illustrations (the semiotic self), the member of the target community (the semiotic other) about a stipulable sign and what it stands for or depicts (the object experienced), as well as the agreement reached between the two parties on the contractual axis of semiosis. This includes situations which Johansen refers to as 'quasi-dialogue', or dialogue through a text, where the utterer or semiotic self is not present in person (1993, p. 254), as is the case when a research assistant conducts the data collection on behalf of the primary researcher.

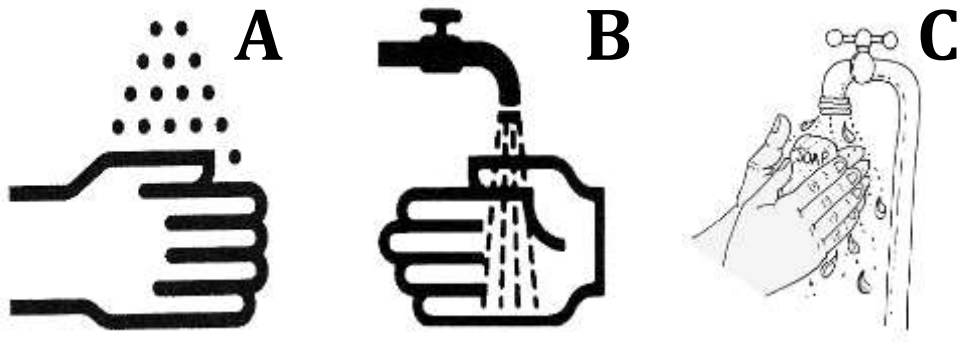
Data collection

The quasi-dialogue between the producer of the visual illustrations and the members of the target community held for the purpose of pre-testing the draft visual illustrations of the nutrition education booklet comprised (a) a highly structured component in the form of a questionnaire (n=55) completed by a field worker in the presence of the respondent, and (b) two less structured focus group discussions (n=7 and n=8), which were held in the hall of the Presbyterian Church in Boipatong and led by the same moderator. The questionnaire was designed in order to establish the target group's views and opinions about different types of visual illustration approaches. Each session which was conducted in the respondent's home language commenced with the research assistant indicating to the participant that the participation is voluntary and anonymous, and that the participant may withdraw at any stage without any negative consequences. The field worker also explained to the participant in everyday language that the aim of the questionnaire is to find out how we can produce visual illustrations which are clear and easily understood and generally acceptable to the target community. The process of completing the questionnaire did not exceed ten minutes in order to steer clear of respondent fatigue effects. This meant that only a limited amount of items could be included. These covered biographical information about the respondent (home language, age and gender), a question about the preferred format of the educational material (a pamphlet, a booklet, or other options such as a poster or a CD), a question about language preference, and a question about whether the final version should be in colour or monochrome (to make dissemination by photo-copying easier). The remainder of the questionnaire contained four items in which the respondent was either presented with a visual illustration and asked to indicate what is being shown in order to measure whether the visual representational latitude of that particular image is adequately narrow, or the respondent was shown a series of two or three different ways of depicting the same information and asked to choose one option and to briefly explain the reason for the choice (see Figure 1). The images included in this section of the questionnaire ranged from clip art style illustrations of soy beans, pictogram style illustrations about frequently washing hands to maintain hygiene, monochrome outline drawings of a bunch of carrots with varying degrees of visual abstraction, as well as a 'straight' colour photograph which depicted different sources of protein. The session was concluded with the research assistant inviting the respondent to make any general comments and to state any views or opinions about how the nutrition education materials can be improved. At the end of the session, the research assistant thanked the participant. Apart from refreshments served at the venue and a small hamper containing fresh vegetables and legumes, no other inducements were offered for participating. The overall intention with the

questionnaires was to avoid a scenario where the respondents were required to supply complex verbal explanations to convey their preferences, as the members of the target group could not be expected to be conversant with advanced visual literacy terms and concepts. For example, the term 'visual abstraction' was not understood by the majority of the respondents, yet when two images with varying degrees of visual abstraction depicting the same referent were shown next to each other, and the respondent was asked to indicate which of the two options is the preferred choice, and for what reason, the respondents were able to convey their preferences, views and opinions without any difficulty.

Figure 1. An excerpt from the questionnaire. The respondent was asked: 'The visual style of the following three pictures is different. Please indicate which ONE of the visual styles you prefer. Please explain your choice.

The focus group discussions were held a few weeks after the questionnaires data was collected and gave those community members who had completed a questionnaire the option of discussing their views in greater detail on a voluntary basis. Additional draft illustrations were circulated for comment among the focus group participants shortly before the session commenced. The focus group discussions aimed to augment the questionnaire data, especially with regard to the role the visual images play in the educational materials, as well as with regard to the appropriateness of the illustrations, including (a) whether the visual representational latitude of a particular illustration approach is sufficiently narrow and the intended meaning of the visual messages can be easily comprehended, and (b) whether a particular illustration approach fits with the



aesthetic preferences of the target community. The focus group discussions were audio recorded and subsequently transcribed and translated into the English language. The focus group moderator commenced each of the two sessions by welcoming the participants and explaining the standard format and general aims of focus groups in brief. The participants were encouraged to 'share and compare' (Morgan 1988) issues and concerns relating to the draft nutrition education booklet in a relatively unstructured way. The moderator commenced each session with a statement along the lines of 'I would like to ask the group to discuss the role of the pictures…' Once the discussion was underway, additional probes were 'Will the pictures help to understand the messages? Can the group mention examples? Will the pictures help with remembering (or internalizing) the messages? Can the group mention examples? Do the pictures increase the appeal of the educational material, i.e. make it more attractive or interesting? Can the group mention examples?'

Data analysis

In the case of the questionnaire data, the analysis involved the tabulation of responses and rudimentary descriptive statistics (calculating means, frequencies etc.), which yielded a basic quantitative indication of which illustration approaches the respondents considered to be more appropriate than others. As far as the analysis of the focus group transcripts is concerned, the purpose of the analysis was to obtain a deeper and more nuanced understanding of the issues and concerns which informed the focus group participants' views about the draft visual illustrations. The analysis comprised two phases. During the first phase, usually referred to as a 'top-down analysis' (Le Compte & Schensul 1999), the analysis sought to find responses in the

transcripts that link with the broad categories that informed the moderator's protocol, such as comments relating to the role the illustrations play in the draft nutrition education booklet. During the second phase, a 'bottom-up analysis' (Le Compte & Schensul, 1999) aimed to identify information in the transcripts relating to the appropriateness of the visual illustrations not directly covered by the themes contained in the moderator's protocol.

Findings

The questionnaire data suggest that according to the elderly (mean age 64 years), exclusively female and predominantly Sesotho-speaking respondents, the final version of the nutrition education material should be printed in the form of a booklet roughly A5 in size, and that the main information should be in the Sesotho language. There was no dominant opinion with regard to whether the final booklet should be printed in colour not, as the ability to make monochrome photocopies with ease seemed to be an important consideration for some of the respondents. With regard to those items of the questionnaire that dealt with the appropriateness of the draft visual illustrations, only 34.5% of the respondents were able to identify the envisaged or intended meaning of a clip art image depicting soya beans. A response of 'beans' was recorded as a correct response, whereas replies such as peas, potatoes or apples were considered as incorrect. It is therefore clear that this particular image should not be included in the final nutrition education booklet, and that clip art style images should be treated with caution in this type of setting. This particular questionnaire item result is in line with a recent study conducted in the Qwa-Qwa region of South Africa, where the visual representational latitude of clip art illustrations was also found to be unacceptably wide. The majority of the respondents did not opt for illustrations with a high degree of visual abstraction and did not include any pictogram-style illustrations in their preferred choices. Opinions were divided with regard to the desirability of a colour photograph (a monochrome line drawing was presented as the alternative option) with some of the respondents mentioning that the line drawings were simpler in appearance and that it was therefore easier to see 'what is going on' in the illustration.

With regard to the focus group transcripts, central themes which emerged are that, according to the opinion of the participants, the visual component of the nutrition education materials plays a very important role and that the participants regard the nutrition education booklet as essential for their work as care-givers. As was to be expected, the group tended to veer towards discussing nutrition education topics, such as what foods to purchase with a limited amount of money, how many eggs should be eaten per week and so on. However, the moderator managed on the whole to steer the discussion towards items listed on the moderator's protocol, without coming across as domineering. Both groups were characterised by a positive, relaxed and open communicative atmosphere and the audio recordings suggest that all present felt comfortable with the overall pace of the conversation.

Based primarily on the top-down analysis phase, the transcript data of the two groups taken together indicate that the participants saw the inclusion of visual illustrations as essential for a number of different reasons. Apart from relatively vague statements such as '*We can be very happy if the pictures could be retained in this books, so that they can increase our knowledge*', some of the comments contain clear, practical descriptions of the role the images play and why the participants see them as valuable, e.g. '*If you remove the pictures from the book, say I'm in a hurry, I want to take a look and read, and wonder where it is. But if there are pictures, I quickly locate it, because here is the picture.*' or '*Yes, we think it's vital [to include images] because sometimes you don't know what soya beans are, but when looking at this pictures, even at the counter, you're able to identify them*'. Several statements in the transcripts imply that the members of the target community engaged with the draft visual illustrations on a strongly literal, as opposed to figurative, level of meaning that emphasises the pragmatic dimension of the images. Examples include '*I think these pictures... if you don't know which ones are lentils, you can identify that type. You can see which ones are soya beans, split peas and*

dry beans' and '*According to me, it's to help one to see for instance, what kind of grains are lentils. Because they're all grains, but they help you to know the difference that the lentils and the soya beans are not the same as the dry beans and split peas.*' and '*The pictures are good… they match the text we've just read here. So, we're happy to see these pictures. They will help us a lot to know what we should buy*'. The participants also expressed clear opinions about the design and content of the booklet, such as '*How are you going to bind this book? Will it be on hard cover? You see kids can take the book, play with it and then destroy it. So I think it's safe on hard cover than when it's like this*' and '*Madam, I'm happy because it was written in a language that anyone can understand. Normally when it's in a foreign language, I mean English or Afrikaans or any other language, the majority of us don't understand, even if there's an interpreter, somewhere he may make it difficult to understand. So, I'm happy that it was written in a language that anyone understands, more especially since we grannies are not educated, and not all grannies went to school. So I think it's a very important book. At least, even grannies will take their reading glasses and read with understanding…*'. The participants also identified and corrected minor spelling errors in the captions.

The two most important items to emerge during the bottom-up analysis phase dealt with the relationship between the text and the visual illustrations, especially that the pictures and text must match closely on a literal level of meaning, and that a large font size is essential for both the captions and the main body of the text. For example, one of the participants stated that '*The pictures are good… they match the text we've just read here. So, we're happy to see these pictures. They will help us a lot to know what we should buy*' and '*Is there anything as you look at this book that you think would help? … Only the... Speak your mind Mama… I'd be happy if the font could be enlarged. And I will be very happy if it can be written in my language. This is Sesotho*'.

To summarise, the questionnaire and focus group data taken together indicate that the design of the educational material should conform to the following main points: (a) the target community values practical information on a literal level of meaning that assists them to distinguish between different types of foods, such as the various types of legumes, and helps them to know what foods to buy. The members of the target community see this as the primary role of the visual illustrations and do not think that the visual images should be included merely in order to beautify, or raise the visual appeal, of the educational material; (b) according to the views and opinions of the participants, a large font size throughout the publication and an A5 size hard bound booklet format, with Sesotho as the primary language, are appropriate; (c) The visual illustrations and the captions, as well as the main text of the publication, must match closely; (d) the majority of the target community do not prefer illustrations with a high degree visual abstraction, such as pictograms, and these are considered inappropriate; (e) the literal meaning of the draft clip art style illustrations was very poorly understood, or the visual representational latitude was unacceptably wide. This suggests that clip art style images should be used with caution in order to avoid a scenario where the visual illustrations generate a wide range of unintended meanings. Based on the above, the draft version of the nutrition education booklet was re-worked and then distributed free of charge in the community as one of the components of the larger nutrition intervention.

Concluding discussion

This paper discussed the process of empirically pre-testing draft illustrations of a nutrition education booklet designed primarily for the caregivers of young children in Boipatong. A main point in the paper is that in order to ensure that the final version of the visual illustrations meets the needs of the target community, entering into a dialogue between the producer of the visual illustrations (i.e. the semiotic self), and the members of the target group (i.e. the semiotic other) is essential. In the case of this particular study, the dialogue may be described as a quasi-dialogue, as research assistants conducted the data collection on behalf of the producer of the visual illustrations. This quasi-dialogue comprised a highly structured component in the form of

questionnaires, as well as an open-ended component that involved focus group discussions. Taken together, the information collected during the two phases of pre-testing confirms the view in the literature that both (a) comprehension, or a sufficiently narrow visual representational latitude associated with a high degree of universalisation, as well as (b) appeal, or an adequate degree of fit with the aesthetic preferences and practical needs of the members of the target community, play an important role. During pre-testing, it is of course not possible to accommodate all participants equally, and to satisfy the whims and fancies of each and every community member in full. However, the main value of pre-testing is that barriers to effective communication can be identified and addressed. For example, one of the participants casually mentioned during the focus group discussion that the font size of the text in the nutrition education booklet should be larger than the standard font size commonly used in printed materials, because the majority of the care givers are elderly and poor eyesight is common among them. As this particular example illustrates, it is ultimately the quality of the dialogue between the producer of the educational material and the members of the target community which determines whether the process of pre-testing can be considered a success.

As mentioned above, the empirical study discussed in this paper took the pre-testing categories suggested by Mody (1991, p. 197), as well as the theoretical frameworks by Pauwels (2005) and Johansen (1993) as a basic point of departure. The primary role of these theoretical underpinnings was to delimit the study to a relatively small number of clearly defined concepts (comprehension versus appeal; narrow versus wide visual representational latitude; and dialogue on the contractual axis of semiosis). To a lesser extent, the theoretical underpinnings also informed the design of the data collection phase, in the sense that the majority of questionnaire items were in some way related to the core concepts that had been isolated at the outset, and parts of the focus group discussions may be described as dialogic semiosis in action. However, it would have been counterproductive to include the terms 'visual representational latitude', 'contractual axis' and/or 'semiosis' in the questionnaire, or to introduce these terms during the focus group discussions and to ask the participants to reflect on them. As the main aim of the study was to empirically pre-test draft educational illustrations as thoroughly as possible in order to ensure a final product that meets the needs of the target community, the analysis of the raw data and the discussion of the findings emphasised the formulation of practical recommendations for the design of the nutrition education material, rather than an evaluation of the theoretical underpinnings, which may form the topic of a separate study.

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POSITIONING 'CONSTRUCTIVIST' ACADEMIC RESEARCH INTO PROJECT-BASED PEDAGOGICAL DESIGN STUDIES FOR FOURTH YEAR INTERIOR DESIGN DEGREE PROGRAMMES

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Abstract

The purpose of this paper is to discuss the benefits of embracing constructivism as a conceptual basis for the practice of teaching and learning in interior design degree programmes; namely Bachelor of Technology, and BA Honours offered at many of the institutions in South Africa.

Deliberation is given to using a constructivist approach to both teaching and learning, and as a research paradigm to better align the research and practical components of these traditionally vocationally-orientated, project-based design programmes.

A research dissertation structure is described to support exit level outcomes, which are intended to equip students with both the research and practical skills and knowledge to practice in the interior design industry, and simultaneously provide a better academic foundation for the discipline at an undergraduate level.
Keywords*: Interior design education. Project-based pedagogy. Constructivist teaching and learning.*

Introduction

Traditionally in design education, the completion of a dissertation to accompany a practical design project was the common prerequisite for a fourth year qualification. While the importance of a written dissertation under the guise of a 'research document' is still acknowledged in most programmes, the epistemological link between the written and practical components is not always explicit or evident. With these fundamentally practice-based disciplines being awarded higher academic status within more traditional university type environments, the relationship between the written dissertation and the design project requires academic credibility.

This raises the question as to whether constructivism could be used as a conceptual basis (in the absence of any other theoretical grounding) in order to produce new and transferable knowledge which directly informs the practice within these traditionally vocationally-orientated programmes. Many of the characteristics of a constructivist teaching practice appear to be inherent in project-based learning which has traditionally been used (and is still applicable) in these programmes. As a teaching strategy it is stated that "[project-based learning] requires inquiry as part of the process of learning and creating something new" (Project based learning... 2013).

Although it is acknowledged that the link between constructivism as a philosophy, on the one hand and an educational practice on the other is rather tenuous, many researchers and educators are actively engaged in using constructivist principles to establish new learning environments. In this scenario the learner interprets and constructs a reality based on their experiences and interactions with their environment, and equally,

concepts, models and theories [and design solutions] are considered viable if they prove adequate in the contexts in which they were created (Murphy 1997).

The main aim of this paper is therefore to identify how constructivist principles could be applied to interior design degree programmes, where as a learning theory knowledge is constructed by an individual through his or her interaction with the environment, and as a learning practice learners actively construct knowledge in their attempts to resolve interior design related problems. How the knowledge is produced, its credibility and the ability for it to be transferable should be considered as a means to improving the academic status of these undergraduate programmes.

Historical background

In the fields of Art & Design education, the completion of an 'Exhibition and Dissertation' was the common prerequisite for a fourth year qualification (e.g. National Higher Diploma) in the former Technikon® programme structures. In the interior design discipline the content and structure of the written dissertation was open to interpretation by the student and influenced by the supervisor. The supervisors were often qualified in an associated art or design discipline due to the general absence of interior designers with appropriate qualifications to fulfil this role at that time.

Although it is difficult to generalize about the content of these documents, in many cases the author started with an intention or background to an idea or problem, followed by a 'telling ' of the method and/or process used to arrive at a solution and concluded with an explanation of the final result. The majority of content was made up of conceptual development sketches and design development or processes used to arrive at a final design. According to Häggström (2008, p. 151-152) the academic limitations of this design-process formulated dissertation are that:

- A good design process does not necessarily guarantee a good design solution.
- Simply documenting a process does not substantiate or validate any new knowledge.
- The dissertation may lack any concluding findings that can stand up to academic scrutiny.

In retrospect it may be easy to discredit the academic rigour of these documents, although this format of a submission did present an ideal opportunity for an integrated assessment strategy to evaluate both skills and knowledge acquired through a self-driven and independent learning process. It is however interesting to note that this assessment strategy is still maintained without exception in all interior design degree offerings.

In 1996 the Bachelor of Technology (BTech): Interior Design degree, as registered and approved by the South African Qualifications Authority was introduced. This programme, with revised exit-level outcomes, specified outcomes and assessment criteria, was made common to all Technikons® (offering the BTech degree), in order to achieve comparable exit level outcomes. This new programme-offering consisted of both practical and theoretical modules. One theoretical module focused on business practice and the other was dedicated to design theory. However the challenges faced in developing suitable curricular and learning structures for the delivery of this programme may have prompted the Committee of Technikon® Principals to declare within four years of implementation that "syllabuses will in future not be determined in general policy" (South Africa. Dept. of Education c.2004) but will remain subject to general policy and the requirements of the Certification Council for Technikon® Education (SERTEC).

The next major development in the landscape of higher education in South Africa was as a result of the merging of Technikons® to form Universities of Technology, and Technikons® with Universities to form

comprehensive institutions. This took place during the 2004/2005 period and would bring about complete autonomy regarding any future developments of interior design courses being offered. The implementation of BTech degrees required an increase in the theoretical content of the courses, and subsequently the entry into the university environment has resulted in a greater emphasis being placed on research within these programmes.

Survey of existing interior design course structures

Purpose of the survey

In order to identify if there had been any significant developments in teaching strategies and programme structures, a sampling was conducted amongst five institutions offering a degree programme at a fourth year level.

A questionnaire was sent to the programme coordinators and/or facilitators in order to identify developments made regarding:

- Exit level outcomes.
- Overall programme structures.
- The content and structure of the research document that is submitted with the final design project.
- The relationship between the research and the practice.
- The academic value of the research document.

Note: Names of institutions and programme coordinators/ facilitators were not considered relevant to the study and are therefore not disclosed.

Research findings

Completed questionnaires and/or supporting documentation were collected from the five institutions, four offering Btech degrees and one a BAHons degree. The findings are summarized below according to the previously mentioned points:

- **Exit level outcomes.**

The fundamental purpose of the qualification is described as: To equip students with the skills and knowledge to practice within the Interior Design industry. Specific indicators also contained within purpose statements included: creative problem solving, construction detailing/technology, administration and management of design and research. In one case a mention is made that a four year degree is a prerequisite to practice interior design internationally. However, no mention was made that this qualification is also a prerequisite to enter into post-graduate degree programmes in this discipline.

- **Programme structures**

The diagram presented below was formulated from the data collected from the various institutions sampled for this purpose. The diagram represents an amalgamation of the commonalities relating to course structures and teaching methodologies identified in each instance.

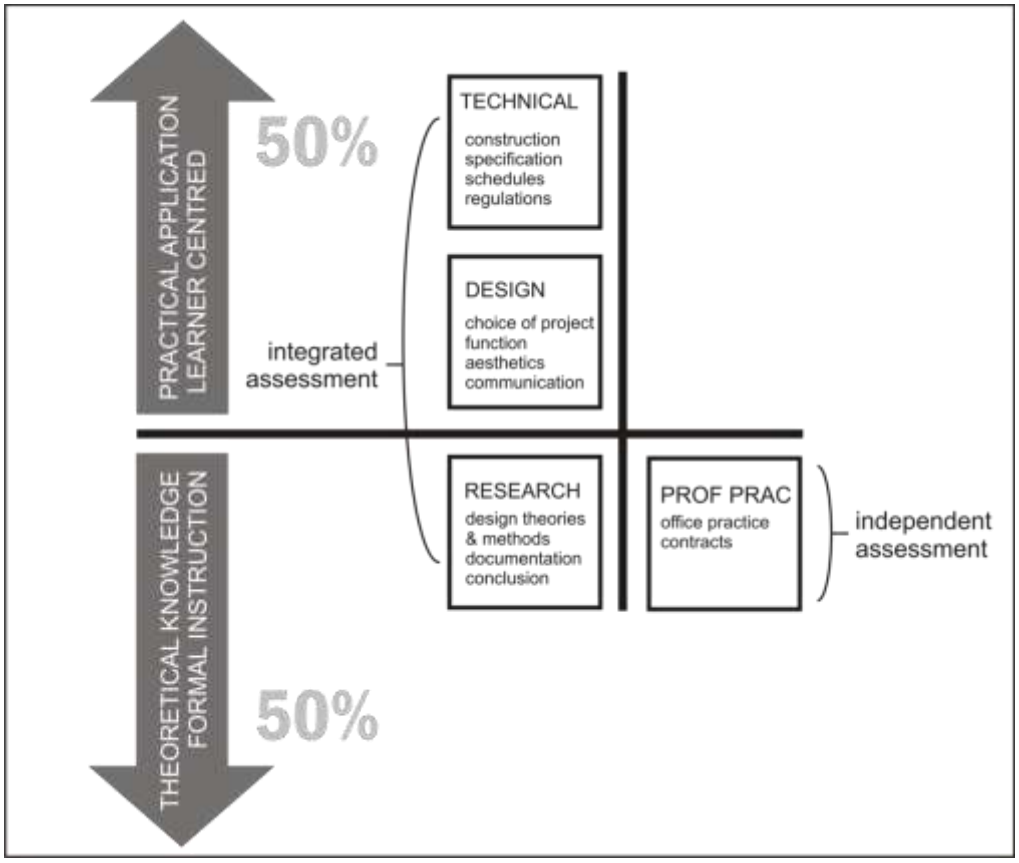

Figure 1. Common aspects of current Interior design degree programme structures. (By author 2013)

Generally the number of modules offered ranges between three and five. A fifty/fifty weighting between the theoretical and practical modules is evident. A learner-centred approach is noticeable for the modules in which the students have prior knowledge, such as the design and the technical modules. Areas of learning which are newer to students require more formal instruction. Although an integrated assessment approach is taken, all modules are in general still independently assessed. However the same examiner is used to determine if there is a correlation between the theory and practice.

The **design** module **is** central to all the programmes. In most cases students identify a major design project which they will work on for the full duration of the year. The project is 'researched' and a related design proposal is produced. As a teaching and learning strategy the design proposal is usually consider as a solution to a non-routine problem that is informed by the research conducted. The individual student's choice of project, personal inquiry into the topic and his/her subjective engagement in producing the 'solution' supports a learner-centred approach.

The **technical** module is used to produce construction drawings and related documents that represent the technical manifestation of the design proposal. The theoretical knowledge acquired through research relating to: construction methods, specifications, materials and finishes, schedules and building regulations are assessed as context-specific applied knowledge.

Students entering a degree programme should have sufficient knowledge and skills regarding the practical implementation of design to allow for an independent learning strategy to be adopted for these two components.

A **research** module is common in all programmes. The content of this module, to a greater or lesser extent, includes research methodology, visual discourse and the theoretical positioning of design-related studies. Students entering the degree programme may only have an elementary knowledge of research, requiring a more formally structured approach to the teaching of research. This module usually covers academic writing and methods of data collection and analysis. A mixed-methods approach to research is common and includes: site surveys, case studies literature reviews, trends analysis and user needs analysis from both primary and secondary sources. The module is usually assessed through submission of a final research document which accompanies the design proposal.

The correlation between the research dissertation, design and technical modules allow for an integrated assessment (conducted by the same assessor) to ensure that outcomes have been integrated in both theory and design and that the dissertation serves the purpose of supporting the design proposal.

The professional practice module proves to be the most complex to integrate, possibly due to some of the original and rather unrealistic outcomes of the original qualification, for example: 'Manage the practice of interior design', 'Submit drawings to relevant authorities' and 'Apply basic management principles'. These are unrealistic due to the hypothetical nature of the associated design proposal. This may also have come about as a result of either attempting to implement integrated assessment for these modules, or in an attempt to include all 26 exit and specific learning outcomes as described in the original programme offering. Therefore aspects related to professional practice that can be assessed as an 'application of knowledge' appear to be better integrated into the practical modules, whereas the aspects requiring the acquisition of new theoretical knowledge are placed in separated formal instruction modules that are independently assessed.

- **The content and structure of the research document submitted with the final design project.**

Comments made here have also been informed through personal observation as an examiner of these documents over the last ten years. The content and structure of these documents vary considerably between institutions and individual students.

The intended content of these written documents generally includes an introduction to the study which describes the physical and social context, justification of its choice and establishment of aims and objectives. In some cases, the introduction is followed by a research strategy where the intended lines of enquiry (methods and sources) are established. In some cases a scope of work or 'programme' is presented in the introduction which seems illogical as the required design intervention can only really be determined after completion of the research. Within this context this appears to reinforce the academic criticism often levelled at design practice as being overtly 'creative and subjective', as in several design practices specifically those based on artistic practice, designers tend to think directly in solutions. This predicament is further compounded by the fact that "… project-based learning can [often] begin with the vision of an end product" (Project based learning...2013).

The main body of the document is considered as 'research findings' and may include some primary research such as: a site survey, samplings or structured interviews and case studies. A significant portion of the text is from secondary sources comprising of 'text-book' summaries of associated design theories, literature reviews with supporting images of loosely associated architectural or interior installations (irrespective of their context). A large section is often only visually descriptive of global current trends relating to styling and aesthetics and product availability. In some cases conceptual and/or design development sketches are included amongst the research findings, which are intended to demonstrate how a solution was arrived at, but would make more sense if presented with the practical design proposal.

Conclusions to the research documents are either completely omitted or briefly used as self-serving justifications of the initial choice of project. The 'conclusion' would have better value if used to formulate the

framework for the resulting design proposal, as often within this learning context the initial problem identified is only fully understood by the end of the research process.

The written component is usually submitted bound together with the practical design development, a full set of construction drawings and an annexure with supporting documentation. This traditional 'architectural treatise' format has some advantages in that it serves as a comprehensive record of a student's performance and facilitates integrated assessment.

- **The relationship between the research and the practice.**

The responses obtained from the institutions varied, stating that the theory/practice link: helps to form a theoretical basis for the study and practice of design; allows for creativity to run parallel and link to theory; helps students challenge accepted assumptions; gives students a language in which to engage in design discourse. Only one response suggested that students research a problem and apply the design solution to the problem.

- **Academic value of the written document**

Without exception all respondents acknowledged the value of the written document with specific reference made to: meeting exit-level outcomes, producing more valid design solutions and to developing skills needed in the workplace due to the fact that research in practice is becoming stronger.

Possibly inherent in the responses to the two previous points, but not blatantly stated, is that the real academic value of the research document should be to produce the context- specific knowledge required to resolve the associated design project.

Conclusion of questionnaire findings

- Despite the autonomy of the interior design degree programmes an organic process seems to have formed programmes with similar objectives.
- The majority of exit level outcomes are determined by the vocational nature of the discipline. Theory of design and/or research is included as a module in all programmes. The dissertation is considered as a research document that is intended to inform the design project of the student's choice. Although the importance and value of research is acknowledged by all, the explicit purpose of it varied between all respondents.
- In all programmes there is evidence of integrated assessment of the research and practical components even if awarded separate marks.
- Professional practice is either structured as a stand-alone theoretical component or integrated in a variety of ways into other modules.
- Significantly, no mention was made that the research document should stand as valid research contributing to new knowledge in the field. The research methods described a general mixed-methods approach but lacked any underlying cohesive paradigm.

Establishing an appropriate research paradigm for project-based design studies

As in most forms of more traditional research it is the epistemological grounds that determine the methodological approaches required to justify research results as explicit knowledge worth being acknowledged.

Most definitions of research state that research is a systematic, patient process of collecting, analysing, interpreting information, and communicating what is discovered to the larger scientific community. Also, that

the point of research is to discover new information, or to verify existing information in new ways that extend or expand knowledge in a field (Leedy & Ormrod 2005, p. 5).

In the fields of art and design it is not inconceivable to think that an artefact can be the end result of such a process and that the resulting artefact potentially contributes towards a body of knowledge. However the relative value between theory and practice is still debateable within academic circles. There is still a general perception that theory produces explicit and transferable knowledge, pertaining to 'scientific' research methods; that knowledge is produced through an objective and scientific research process, and it is 'scientific' because it is viewed as a systematic process of discovery, delivering objective knowledge independent of any subjective considerations. On the other hand, practice is still deemed to produce embodied and unchallengeable (even indefinable) knowledge. Practice is seen to pertain to an artistic/creative and therefore subjective process and is also considered to deliver, or invent products that are dependent on the specific character of the maker (Barfield & Quinn 2004).

Another valid concern is that even if an artefact is considered as a valid research output, the knowledge produced through this process must be transferable and be able to be tested. This may have been a contributing factor for a decision made by the Ministry of Education in 2003, to stop recognising artefactual research output for subsidy purposes (South Africa. Ministry of Education 2003). This decision has subsequently had a significant impact on institutionalised art and design education on many levels. In interior design education this problem is compounded as no final product or artefact is ever produced. The final outcome of the learning process is usually a design proposal only. In certain of the other practice-based disciplines however, such as engineering or industrial design, a working prototype is usually produced that can be empirically tested to determine its efficacy and therefore the extent to which the research aim has been met. These results of the testing process itself can be considered to produce new knowledge.

According to Häggström (2008, p. 153) a possible answer to this 'impasse' could be to consider design as a problem-solution and thereby as a teaching strategy to shift the focus of the research onto the problem rather than the solution. As a teaching strategy this would support practice-based learning, which requires 'research' as part of the process of learning and creating something new. The new knowledge produced relating to the problem should be transferable and could be 'tested' relative to the specific context in which it was produced. Equally as an assessment tool (in the absence of a testable product) it would enable the student to "articulate explicit reasons why a specific design ought to be accepted as a reasonable solution to a defined problem" (Häggström 2008, p. 153).

Why use constructivist inquiries for design studies?

There is an emerging paradigm of constructivist and interpretative research being used in the interior design field. These lines of enquiry are generally defined by the following principles: knowledge is established through the meanings attached to the phenomena studied, researchers interact with the subjects of study to obtain data, the inquiry changes both researcher and subject, and the knowledge created is context and time dependent. They are characterized by a belief in a socially-constructed, subjectively-based reality that is influenced by culture and history. (Coll & Chapman, cited in Krauss 2005, p. 759). The research data collected requires interpretation by the researcher to develop causal explanations to the particular phenomenon being investigated (De Vaus 2001, p. 2).

According to these definitions a constructivist approach supports the relativist nature of many interior design problems wherein the subjects of the study are to a large extent the end users of the spaces. The researcher/designer may interact with the end users to determine their socially-constructed and subjective realities and how these realities relate to their functional and emotion needs within the built environment in

which they operate. The researcher could now take on the role of the designer where an interpretation of the data collected is required in order to produce a design solution to address the particular problem identified.

Unfortunately the hypothetical nature of a design proposal rules out evidence-based research methods being used more commonly in the interior design industry, as the final design is never built and therefore can never be tested. For example, methods such as 'Monitoring implementation of design and construction' and 'Measuring post-occupancy performance results' which are required in order to obtain conclusive data can never be implemented (Friedow 2012 p. 35). Students should however be knowledgeable of this methodology and its growing significance on the practice of interior design.

Additionally some of the practical advantages related to the theory of constructivism as a line of inquiry are described by Guba & Lincoln (1994 p. 112) and read as:

- The relationship between the ontology, in this case considered as 'relativist' and the epistemology which is 'transactional and subjective' gets blurred, allowing students to learn about the subject and what can be known about it simultaneously.
- The investigator and the object of the investigation are assumed to be interactively linked so the 'findings' are literally created as the investigation proceeds.
- The inquiry aim is that of understanding and reconstruction.
- The nature of the knowledge is individual reconstructions that are formulated around consensus.
- The' voice' is one of a passionate participant.

Many of these points support the previously described learning outcomes of the interior design degree programmes.

Conclusion

The survey findings and literature reviewed appear to indicate that the teaching and learning aspects of these current degree offerings that need to be reconciled are:

To retain the fundamentally vocationally orientated nature of the programme yet include sufficient scholarly research as required for a degree qualification.

To meet exit level outcomes as determined by the fundamental purpose of the qualification i.e. to equip students with the skills and knowledge to practice within the Interior Design industry.

To maintain an equal balance between the research and practical components to avoid 'academic drift', as currently the majority of students completing this programme enter the work place.

To establish a solid conceptual teaching and learning basis that equally informs the practical and research modules and in turn better aligns the research to the practice.

That in the absence of a final product that can be tested, any new knowledge produced must be transferable and withstand academic scrutiny. This also has significance in developing appropriate interior design scholarship to prepare students for post graduate studies.

According to Häggström (2008, p. 153) it may be possible to reconcile these issues if within this context, design is considered as a problem-solving activity. She admits that this definition of design is not accepted by all, and although intuitive creativity may be an important part of the artistic skill it however "does not help the designer in explaining why his or her design is worth acceptance". She also suggests that the role of the research accompanying a design project should be to "articulate explicit reasons why a specific design ought to be accepted as a reasonable solution to a defined problem", and "to make all relevant reasons and grounds [for design decisions taken] as explicit as possible… also reasons that may not be based on facts, but rather refer to aesthetic, ethical or even emotional values".

In addition, Häggström (2008, p. 152) states that the dissertation (in a traditional research format) is also "an important teaching strategy as it requires a logical construction". It helps students to analyse and grasp which explicit reasons and grounds may support their definition of the problem, and which ones can validate their design in a rational manner to avoid design solutions based on misconceptions or a prejudiced understanding of a situation. This form of writing is also relevant to design education as the analytical structuring skills developed are equally useful for the practitioner. The content and structure of the dissertation therefore need to fulfil these roles.

The dissertation should begin with an introduction to the problem describing the physical and social context and theoretical positioning of the study, followed by the aims and objectives. Within this framework the main aim of this study should therefore logically be: to produce a design proposal that presents a possible solution to the identified 'problem' through interior design intervention. A research plan should be included in the introduction outlining the appropriate methods and sources needed to construct the knowledge about the specific problem and the design knowledge required to address that problem. An explanation of the research-process is important as it determines the reliability and/or validity of 'new knowledge' produced. Data collection methods should favour empirical methods from primary sources to augment a constructivist learning approach.

The content of the main body should not only document the research findings, but also demonstrate the student's ability to interpret the findings by making them specifically relevant to the design problem being addressed. Supporting data from secondary sources such as: building regulations, product availability and summaries of design text books may better be placed in the appendix and cross referenced as sources in the main text. Accounts of the design process and/or development should be omitted from the main body and rather be presented as practical work.

Most importantly a succinct conclusion is critical and should describe: the design criteria and principles that need to be assimilated into the design proposal, a user-needs analysis, and the extent of the programme or scope of work that needs to be addressed in order to achieve the main aim. In this format the conclusion establishes the epistemological link between the research and the practice, as the knowledge produced about the problem is the same knowledge that is required to substantiate the design proposal. The design can now be assessed as a problem-solution.

The written dissertation in this form could exist as a piece of valid academic research on its own thus improving the academic level of these undergraduate programmes. Exit level outcomes would still be adequately met, equipping students with both the practical skills and research knowledge to practice in the interior design industry and to apply these skills and knowledge to any other design problems encountered in the future.

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INTRODUCING DE JONG:
REFLECTIONS UPON RECONSTRUCTING THE LIFE AND PRACTICE OF A WHITE, ENGLISH SPEAKING DESIGNER

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Abstract

Jacob Dlamini, in his seminal text 'Native nostalgia' (2010), confides that the first time he heard the term 'economic sanctions' used in the township was in the early 1980s when he woke up one day to discover the local Barclays Bank had been renamed First National Bank (FNB). Notably, Dlamini continues to list "a bottle store and … the biggest news agent in Katlehong" as signifiers of urban life of Katlehong, but only the bank is recalled by brand. At the time, the re-branding of Barclays engendered a storm of protest in South Africa, both in design circles, and amongst members of the public. Perhaps less known than the infamous 'rabbit' and 'AK-47 rifle' is that a local design firm – Ernst De Jong Studios – was asked to submit an alternative to the 'imported' identity. In the late 1980s, 30 years after he established himself as a young graphic designer in Pretoria, it was also De Jong who was tasked with persuading a white, patriarchal Nationalist Party Cabinet meeting that a white patriarchal male had no place on South Africa's currency: the result was the CL Stals – Second Issue: the 'Big Five' bank note series.

This paper outlines challenges inherent in proposed research with regard to the individual designer as an 'interactive dynamic of the community and society in which he or she is embedded'. Ernst de Jong and his studio arguably shaped many of the shared values, practices, processes and products of an ostensibly 'modern' South Africa through the construction of visual identities of communities – both corporate and national – from the 1950s to the 1990s. By importing his experience of American modernism into an African context, De Jong brought diverse influences to bear on his task of 'imagining' a nation. Intersecting with debates on the nature of history writing, and writing design, this project grapples with ideas of modernity, domestication, and South African graphic design history in its reflection upon the life and practice of a singular South African communication designer.
Keywords*: Design history; biography; Ernst De Jong; individuated design; domestication*

Introduction

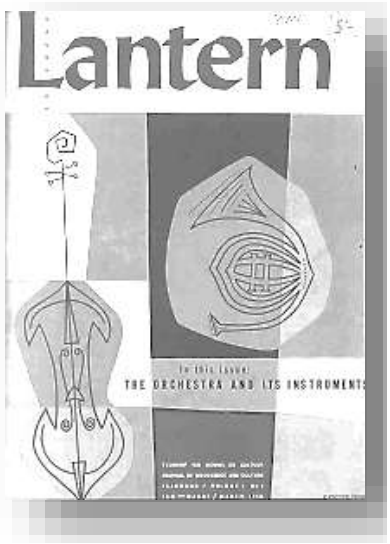
Focus of the overall paper

This paper reflects upon the challenges presented by a proposed study that sets out to explore and describe the life of Pretoria-based designer and artist Ernst De Jong (1934 -) and addresses the sometimes controversial idea of 'the designer' and his/her creative orientation to the world. In doing so, the paper responds to concerns of theory and criticism in the field of design history and education.

Background: why De Jong?

Ernst De Jong was born on 29 September 1934, in Pretoria, South Africa; in 1951, he was awarded a scholarship to attend the University of Oklahoma (OU) in the United States of America (USA) where he pursued a degree in Fine Arts (majoring in Information Design).[1] In the USA, De Jong was introduced to American abstract expressionism and was awarded the Letzeiser Arts Degree Medal for Best Student in the Faculty in 1956. In 1957 he was briefly employed at the Graphic Arts Centre in Oklahoma City but decided to return to South Africa.

Figure 1. George Duby (art director) and Ernst de Jong (designer), 1958. Cover of *Lantern* (7)3. This is the first issue of *Lantern* where the designer of the cover is acknowledged.



Upon De Jong's relocation to Pretoria in 1958 he secured a lecturing position at the Pretoria College for Advanced Technical Education;[2] this appointment resulted in both an educational and a corporate shift with regard to art and design in the region. De Jong incorporated the Oklahoma experience into his teaching methods and immediately started to exert a professional presence: commissioned to design selected covers for *Lantern*, a journal published by the Association for Adult Education, he not only transformed the rhetoric of the covers with his lively modernism (Fig.1), but, by signing his design, also introduced the concept of the graphic designer as 'artist', or 'author'.

The inseparability of painting and visual communication design skills is, indeed, a tenet that De Jong upholds and vigorously defends. Consequently, despite the launch of his commercial design enterprise Ernst De Jong Studios in 1958, he mounted a solo exhibition of paintings and lithographs in 1959. In the following year De Jong was commissioned by the South African Centre for Industrial and Scientific Research (CSIR) to design its exhibition stand at the 1960 Pretoria Show, which effort landed him the Designer's Gold Medal. In 1961 De Jong also won a national competition to create selected murals for the new Transvaal Provincial Administrative building and in 1963, De Jong — only 29 years old — was appointed director of Intam (LPE) advertising agency as well as design advisor to the United Tobacco Company.

Figure 2. Ernst de Jong, 1960s. Photograph in collection of Ernst De Jong; reproduced with permission of the designer.

Coterminous to these achievements, De Jong held solo exhibitions in Johannesburg, Pretoria, Montreal and Milan. In 1965, De Jong was offered exhibitions in top galleries in Manhattan; this offer was a watershed moment for De Jong, who, when presented with the possibility of pursuing a lucrative career in the arts in New York, chose to remain in Africa.

Once established in Pretoria, De Jong dominated the field of corporate identity design. Work from his studio appeared in international publications such as *Graphis* and the *New York Art Directors Annual*. In 1972 De Jong's 'Oklahoma Series' was selected to

[1] Background facts extracted from 'Legendary painter Ernst De Jong: chronology 2013' (De Jong 2013), as well as conversation with the designer at his residence in Pretoria (De Jong 2013, pers, comm., 22 May).
[2] Currently the Tshwane University of Technology.

represent South Africa at the Venice Biennale, and he was tasked with establishing the new Information Design programme at the University of Pretoria (UP). Esmé Berman (1983, p.110), in 1983, states that, 'Ernst de Jong's career furnishes a story of success … [I]n the field of advertising design … he is considered one of SA's leading practitioners'; subsequently, in 1987 De Jong won the prestigious Society of Designers in South Africa (SDSA) Award for outstanding design achievement. In 1988, Ernst De Jong Studios hosted the first meeting of the Blue Sky movement that had as its aim 'the creation of a unique design style based on South Africa's diverse cultural heritage and natural influences' (De Jong 1994, p.10). In 1989 De Jong was appointed by the South African Reserve Bank as design director for five new banknotes, popularly known as the 'Big Five' series. In 1994 De Jong closed his studio in order to devote his energy to painting and teaching.

This brief synopsis suggests that there is much of interest in De Jong's life, yet the only published biographical material on De Jong as seminal designer appears as a brief acknowledgment in *Image & Text* (*Image & Text* 1994, p.32).[3] De Jong (2013a:4) states that, in the years 1958 to 1994, Ernst De Jong Studios 'produced much of South Africa's most prestigious graphic work'; this 36-year period coincides with the establishment of the Republic of South Africa, follows the trajectory of Nationalist Party (NP) rule, and ends with the coming to power of the African Nationalist Congress (ANC). De Jong's clients were often influential and powerful; while much of his client-base was in Johannesburg, De Jong lived and worked in the administrative capital, Pretoria. He is a second-generation English-speaking South African that shaped both monumental and quotidian experiences of South African citizens. Consequently, his 'prestigious graphic work' did not happen in a vacuum, neither was it a purely a superficial aesthetic.

Jessica Helfand (2001, p.137) states that graphic design

> responds to needs at once personal and public … and is informed by numerous disciplines including art and architecture … Graphic design is a popular art, a practical art, an applied art and an ancient art … [I]t is the art of visualizing ideas.

Here Helfand (2001, p.136) is constructing the context for a reflection upon the prolific career of Paul Rand (1914-1996), 'arguably the most celebrated American graphic designer of the twentieth century', but her comment on the nature of graphic design serves to highlight much of what is important about De Jong. His design work was not merely a commercial necessity: it was the art of visualising ideas, and these ideas have not, to any meaningful extent, been described, explored, or interrogated.

Following from the above, the undertaking to make visible this history seems a necessary one. However, once they are acknowledged, the reasons for the lack of critical (or otherwise) writing on De Jong reveal some of the challenges faced by the would-be biographer of a man who shaped the visual culture of a post-colonial community through a modernism that in the twenty-first century 'seem[s] worthless as a reference to be shared globally' (Calvera 2005, p.371). The 'problems', broadly speaking, are twofold: the theme of biography itself, and the peripheral nature of the proposed history in relation to the global understanding of the subject of design. These framing conditions, impacting as they do on the validity of the study, are therefore briefly considered in this paper.

Key terminology

The field with which the study concerns itself is *graphic design*, namely the design of visual materials for — most typically — client-driven, commercial applications. Although regarded by many as 'technologically undermined' (see Helmer Poggenpohl & Sang-Soo 2001, p.18), the terms 'graphic design' and 'graphic

[3] De Jong is acknowledged in Esme Berman's ***Art and artists of South Africa: an illustrated biographical dictionary and historical survey of painters & graphic artists since 1875*** **(1983, pp.110-111).**

designer' are used selectively in this paper, since they are appropriate to the timeframe and artefacts that the study addresses.[4]

Premise and methodology of the paper

The premise of this paper is that the writing up the biography of an individual is not unproblematic. However, very few (if any) large-scale biographical studies of individual graphic designers in South Africa have been undertaken and, arguably, a need exists to remedy this lack. Consequently, the paper reflects upon the case of De Jong in order to address some of the points of issue that a writer (or student) of a local design history may encounter when embarking upon an endeavour of this nature.
In order to explore this premise, the paper reviews recent scholarship on the topic, and applies concepts gleaned from the literature to the topic of the study. The paper is also informed by interviews with De Jong himself,[5] as well as a measure of engagement with his work, although an analysis of the content of these interviews, or the designer's output, cannot be addressed here.

The texts selected to construct the present argument are limited by the scope of the paper, but hopefully represent pertinent scholarship on the topics of history writing, writing of design history, and the field of biography in particular. At the very least, a reasonable framework is established within which to begin to interrogate biography as a theme of South African design history.

Rescuing poor modernists - the case for individual biography in South African design history

The shrinking of great men

Any enthusiastic impulse to document the life of a prominent designer requires that the researcher first acknowledges the mid-twentieth-century rejection of 'the ideas of the elite and individual intellectuals' (Green 2008, p.27). Anna Green highlights Lucien Febvre's (quoted in Green 2008, p.27) insistence, in 1922, on history writing that seeks to understand collective human behaviour: 'Not the man, never the man', declares Febvre, who was co-founder of the *Annales* school in France that shared many of the convictions of Marxist historians in Britain. Febvre's assistant was Fernand Braudel whose subsequent work had as its purpose the 'shrinking [of] great men and big events into the sovereign causalities of economics, population, and environment' (Eley 2008, p.37). Reacting against Victorian histories that were set upon constructing 'a gallery of worthies' (Tosh 2000, p.75), scholars were now moved by the populist identification of 'history from below' (Eley 2008, p.45). The writing of individual biographies was therefore one of the earliest casualties of the rise of social history during the 1960s and 1970s.

By the end of the 1970s, however, social history was encountering the 'much vaunted "linguistic turn"' (Eley 2008, pp.125-126) — a shift from 'social' to 'cultural' modes of analysis. First to be dismissed, biography was, again, the first theme of history to be re-evaluated. With feminist scholars in the lead, historians recognised that the life of an individual is a complex text in which the intersection of elaborate and multiform forces might be traced through and inside a particular life, allowing the generalized and the abstract to be focused through the personal and the particular (Eley 2008, p.168).

However, notwithstanding its resurgence, John Tosh (2006, p.66), at the close of the twentieth century, can still dwell on the reasons why biography has 'no serious place' in historical study. Tosh (2000, pp.75-76) concedes that the most pressing concerns are those of bias and the tendency to a simplified, linear

[4] Many prominent practitioners in the 2000s continue to refer to themselves as 'graphic designers' despite their expanded engagement with visual media. An example is Bruce Mau (2005, pp. 597-599).
[5] Oral history, as a method of data collection, in itself presents challenges that cannot be addressed within the limitations of this short paper. For a useful overview, see Green (2008, pp.82-98).

reconstruction of events. Somewhat ambivalently, he suggests that biography should not be 'dismissed altogether' (Tosh 2000, p.76), pointing out that full-scale biographies of dictators are indispensable, just as biographies of unknown individuals make visible a neglected aspect of the past. Tosh (2000, p.76) applauds the scholarly rigour required in systematic biographical research, and the indispensable role of biography in the understanding of intention. Although there is dispute with regard to the latter, Tosh (2000, p.76, emphasis in original) argues that 'plainly the motives of individuals have *some* part to play in explaining historical events. Once this much is conceded, the relevance of biography is obvious'. Biography is, therefore, legitimate, but the inference is that to be relevant its subject must either be an instrument of supreme evil, or labour in abject anonymity.

This distaste with regard to the invention of 'heroes' is reflected in twentieth-century design discourse. John Walker (1989:130) warns that social history has come to be regarded as the appropriate way of writing histories of design; the discipline can no longer claim an 'alternative' status. Walker (1989, p.132) cites Adrian Forty's *Objects of desire* (1986) as a 'sophisticated attempt at a social history of design' in which Forty (2005 [1986], p. 245) posits that '[o]nly by … shifting our attention away from the person of the designer can we properly comprehend what design is'. The analysis of designed objects was now seen as being capable of giving 'direct access to the ideas and emotions of a social group' (Walker 1989, p.133).

However, despite Walker's call for a social history, the next decade saw the publication of several bestselling monographs that would catapult their individual subjects to graphic design stardom — for example, Jon Wozencraft's *The graphic language of Neville Brody* (1988) and Lewis Blackwell's *The end of print: the graphic design of Dave Carson* (1995). Steven Heller's *Paul Rand* (1999) — for which Helfand wrote the biographical sketch referred to earlier — did not so much create a legend, as canonise an old one. Whatever the merits, or not, of these paeans to individual genius, the 'designer-as-hero' prompted debate that was not limited to scholarly theses. Paula Scher (2001, p.31), in response to Rick Poynor's definition, in *Creative Review*, of meaningful graphic design 'authorship', takes Poynor to task for suggesting that '[t]he designer who merely attempts to achieve well-crafted design does not merit serious discussion'. Scher, herself an icon of twentieth-century graphic design, clearly disagrees, but the problem is pertinent to a study of 'successful' designers such as De Jong.[6]

At the time of writing, the most current manifesto on the state of design history is arguably that of Kjetil Fallan, Professor of Design History at the University of Oslo. Fallan (2010:ix), acknowledges the paucity of surveys of design historical scholarship and his aim is to supplement existing frameworks by focusing on more recent discourse. Fallan (2010, pp.7-8) is emphatic that 'design is not art', and outlines the problems in design history that arise from this assumption, one of which is the tendency to view designers as 'artists' or 'authors' — resulting in the much-maligned 'heroic approach'. Fallan (2010, pp.8, 10) leaves no room for doubt:

> Besides being highly elitist, disturbingly mythopoeic and contributing to panegyric personality cult, this bias towards creation/production has also resulted in a neglect of use and consumption.

Thus, the term 'biography' — for Fallan (2010, pp. 37;98) — only refers to the life of objects. Histories of technology, actor-network theory, script analysis and ***domestication*** are what Fallan (2010, pp.56-104) proposes as alternative analytical frameworks for the history of design. Here the emphasis is on use of design in which 'symbolic codes of various kinds are converted into … a personal expression for the user' (Fallan 2010, p.93).

[6] The catalyst for this polemic was, largely, the publication of Bruce Mau's *Life style* (2005 [2000]); however, it is interesting to note that Mau's self-promotional text was followed by several monographs celebrating individual graphic designers who have had as their goal 'well-crafted design', for example *Born modern – the life and design of Alvin Lustig* (Heller & Lustig Cohen 2010) and *Saul Bass: a life in film and design* (Bass & Kirkham 2011).

The battle lines are therefore drawn. Published in the same year as Fallan's treatise, *The design history reader* (Lees-Maffei & Houze 2010) only features the names of two eminent designers in the titles of the 67 contributions to the volume.[7] More recently, in *Writing design: words and objects* (2012), Grace Lees-Maffei (2012, p.3, emphasis added) reiterates 'that design history has taken the *object* as its starting point … to find out about *objects* and communicate their social and historical significance'. Of the 17 contributions, only one title alerts the reader to a prominent individual, who is, however, an architecture critic, not the designer of the object in question.[8]

Within the context of the position taken by design theorists such as Fallan and Lees-Maffei, the question of whether 'the intersection of elaborate and multiform forces can be traced through a particular life' necessarily prompts the answer, 'apparently not'. However, in considering the second difficulty raised by a study of De Jong, namely the peripheral nature of the proposed history, Fallan's methodology points the way to an instrument that not only enables narratives about design in peripheral communities, but admits individual authorship (if not an omnipotent hero) to the historical narrative. This is the theoretical framework of ***domestication***, and it is reviewed in the following section.

Rather unknown regions: writing design history on the edges of the geographic map

The broad field of study that Fallan (2010, p.55) advocates is *sociodesign*, in which it is acknowledged that technology and society are 'formed and transformed simultaneously'. At first, the approach appears to hold little relevance to a study of graphic design: Fallan's examples are objects such as telephone booths — in Norway. However, the more useful underlying principle is how 'the phenomenon in question is perceived, interpreted and used' (Fallan 2010, p.70). Fallon (2010, pp.89-104) makes a strong case for *domestication*, a model of the consumption process developed by sociologists Roger Silverstone and Leslie Haddon, who offer an account of 'the role of information and communication technologies in everyday life which focuses on innovation as a social and cultural, as well as a political and economic, process' (Silverstone & Haddon 1997 [1996], p.45). Fallan (2010, pp.99-100), in seeking to broaden the concept of *domestication* from the realm of the home to that of national community, calls on the arguments of Anna Calvera (2005, pp.373-383), and in so doing, makes a fortuitous leap from Norway to, as Calvera (2005, p.373) puts it, 'rather unknown regions'.

The leap is, first and foremost, geographical, in that Calvera's (2005, p.380) concern is with the practical problems faced by a local historian, where 'local' signifies a national community 'whose design activities and achievements are still unknown abroad' (Calvera 2005, p.372). Calvera raises the uncomfortable question of the relevance of local histories within the global discourse. 'Peripheral' works are similar in character to those made in the 'centre'; therefore, local design is 'nothing other than new examples to confirm what is already known' (Calvera 2005, p.374). Rather depressingly (for those on the periphery), local design may never be interesting enough to be mentioned, except in a footnote to a world history. In particular, Calvera (2005, p.377) identifies the problem of the simultaneous arrival of 'the idea of design' in many geographical areas in the 1950s and 1960s. What Calvera (2005, p.376) suggests, as a counter to this difficulty, is that it is 'the duty of a local historian … to explain to foreign colleagues what has been different, specific or original about a local process'.

Although Calvera never uses the term *domestication*, Fallan (2010, p.99) proposes that her argument refers 'precisely to … the domestication of ideology. Her point is that … ideas/ theories/knowledge are transformed by their users — just as with the domestication of products'. The second leap, then, is the shift from a

[7] Of the two articles, one addresses, in a highly ironic tone, Forty's concern with the 'omnipotent' designer – in this case Philippe Starck (see Lloyd & Snelders 2010 [2003]).
[8] See Munson (2012, pp.120-130).

theoretical concern with *objects* of design to an interest in the adaptation ***of ideas*** about design, but also, as Fallon (2010, p.100) emphasises, the adaptation ***to ideas,*** aesthetics and technologies. An understanding of *domestication* in this sense, Fallon concludes, results in a 'highly rewarding concept' with which to respond to Calvera's call for purposive regional/national narratives in design history.

But does this call include biography? Calvera (2005, p.374) observes that,

> peripheral narratives … have always the same structure: a nation is only known by a highlight moment or personage … It is easy to see the connections between the objectives of this research and … the boundaries imposed by the grand narratives of history.

Calvera's insistence that local histories have ***always*** been reconstructed as the act of a single 'personage' is, perhaps, debatable; had this been the case, De Jong would be well represented in local literature. However, her point — that adhering to personality cults in regional design history will not persuade foreign colleagues of the worth of this history — cannot be disregarded.

Nevertheless, Calvera does not dismiss biography out of hand. What Calvera (2005, p.374) believes is critical is that the character of 'marginality' should not merely describe itself in terms of appropriation of signs, or as a victim of western imperialism, but rather acknowledge 'alternative experiences that [are] peculiar to local characteristics'. Calvera is positive about westernisation in Creole culture: the design historian is required to grasp the potential of design to play a role in the 'criticism, renewal and transformation' (Calvera 2005, p.378) of a peripheral community transformed by the arrival of 'design'.

The personal and the particular as intersection of multiform forces

Drawing on Calvera's arguments, the proposed study posits that South Africa is a country on 'the periphery' and that it encountered the arrival of 'the idea of design' in the 1950s; it takes as its premise that this arrival was, to an extraordinary degree, facilitated by the American-trained designer Ernst De Jong and as such the latter deserves attention. In answering questions of 'How?', and 'Why?', design arrived in a given nation, the question of 'Who?' must therefore, of necessity, also be addressed. To this purpose, the methodology of *domestication* can be used to examine not only how De Jong, on a personal level, adapts and modifies American modernism for his own use, but also how and why his audience(s) readily incorporate modernity into their national 'home'.

Another country in which 'Design' arrived in the mid-twentieth century was Australia. As was arguably the case in South Africa, the focus of Australian visual culture shifted, in the 1950s, from Britain to North America. Roger Fry (1995 [1989], p.213) asserts that, 'Modernity [in Australia] was … a regime of signs — the arrived appearances of the modern world of metropolitan capitalism'. In contrast to Calvera's optimism, Fry (1995 [1989], pp.216-217) argues aggressively for the 'emptiness' of Australian modernism, that, he claims, 'has never been other than a culture of appropriated fragments'; as a consequence, Fry postulates, postmodernism was taken up in Australia 'with vigor'.

What is of interest here is that postmodernism did not find such a ready home in South Africa. De Jong's own attempts, with fellow Blue Sky members in the late 1980s, to draw on postmodernism's legitimisation of the local and conceptualise an 'indigenous' South African design language, faltered (De Jong 1992, p.10). The reasons for this inability to break away from the 'appropriated fragments' of the centre continue to exercise the South African design community: 20 years after the launch of Blue Sky, celebrated South African designer Garth Walker (quoted in Unkeless 2008) voices the ongoing necessity 'to establish a new visual language for the country … Our target audience is the people of Umlazi and Soweto but brochures look like they come

straight out of Milan'. Walker (quoted in Unkeless 2008) observes that the country's new elite takes direction from the West, suggesting that 'all the emerging markets want to be a super Paris/London/New York'.

Perhaps the grip of the latter could be attributed, in part, to the impact of De Jong's import of a universalising modernism — at a particular time in South Africa's history — which allowed (and perhaps continues to allow) citizens to 'maintain both the structure of their lives and their control of that structure' (Silverstone & Haddon (1997 [1996], p.60). In terms of *domestication*, argue Silverstone and Haddon (1997 [1996], p.60), 'it is precisely the social, political, and economic dimensions of the struggle over meaning and influence which are at issue'.

Conclusion

In conclusion, it can be argued that the 'heroic approach' has been held at bay to such a degree that no seminal figures have emerged in terms of graphic design history in Southern Africa. While laudable in one sense, a 'history from below' only reconstructs one aspect of the past; ironically, 'successful' graphic designers seem to have exchanged places with EP Thompson's 'poor stockinger', and are, perhaps, in need of rescue — not for purposes of launching elitist personality cults, but as a contribution in the context of citizenship. As Tosh (2008, pp.141-142) points out, 'without historical perspective we may fail to notice continuities which persist, even in our world of headlong change'.

Figure 3. Ernst de Jong (designer), c1965. Logo design for Ernst De Jong Studios. Reproduced with permission of the designer.

De Jong operates as a node that feeds into the largely unexplored rhizome of South African visual culture; a reflective/reflexive study of De Jong's personal history — which is alert to the pitfalls of grand narratives — contributes to a memory bank of what is unfamiliar, or alien; Tosh (2000, pp.19-20) regards this strangeness as a nation's most important cultural resource:

> Our sense of the heights to which human beings can attain, and the depths to which they may sink, the resourcefulness they may show in a crisis … [is] nourished by knowing what has been thought and done in the very different contexts of the past.

Although all biography deals to some degree with nostalgia, Jacob Dlamini lends support to a remembering that is reflective, ironic and humorous. Quoting Svetlana Boym, Dlamini (2009, p.18) argues that 'longing and critical thinking are not opposed to one another'. It is, however, important to be mindful that reflective nostalgia should *be* critical. A key objective of presenting this paper at the 2013 DEFSA conference was to gauge whether an audience who, for the most part, had not experienced 'the very different context' of a 1960s and 1970s South Africa, and who could have no recollection of the impact of De Jong on its discipline, was intrigued or disturbed by the proposed project. The response was encouraging. Referring (nostalgically) to his childhood hero Gerrie Coetzee, Dlamini (2009, p. 145) points out, 'human beings might not choose the circumstances under which they make history, but they still make history anyway'.

De Jong made history, and deserves a place in his South African sun.

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DESIGN PROCESS OF NOVICE FASHION DESIGN STUDENTS: AN EDUCATOR'S REFLECTIVE ANALYSIS

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Abstract

This paper centres around a creative design project for first-year fashion design students. This project was informed by (1) the theoretical underpinnings of design thinking, (2) a human-centred approach to design and (3) protocol studies of novice engineering and industrial design students' approaches to the design process. The design project assumed a design process method that focused on human beings – and their needs – as the driver for fashion design. The aim of adopting such a human-centred method for creative design was three-fold. Firstly, the design project aimed to create a culture and awareness of human beings and their needs as a driver for fashion design. Secondly, the project aimed to explore the design process of first-year fashion design students with regard to how they framed a design problem and design needs of human beings within a community, in an attempt to find the best possible solution. Thirdly, the design project aimed to establish whether the design process of novice fashion design students yielded similar or different results to that of empirical findings of protocol studies.

In this paper, guided by the research question, which pertained to how novice fashion design students approached a human-centred design process, I offer a reflective analysis, as a fashion design educator, concerning the design process employed in this particular design project. I then compare my reflective analysis to findings from protocol studies conducted with novice engineering and industrial design students. The paper begins with a theoretical discussion of design thinking and human-centred design. The discussion then shifts to the findings of protocol studies of novice engineering and industrial design students and their approach to the design process. Subsequently, the paper briefly contextualizes the creative design project and then focuses on my reflective analysis concerning the design methodology employed by novice fashion students drawing comparisons with the protocol studies.

This research adopts a qualitative paradigm, and makes use of my detailed notes to support my reflective analysis. Based on a comparative method of analysis, I draw comparisons or differences between my reflective analysis and the findings of protocol studies. The paper contributes to the discourse on the design process, human-centred design and design education from the perspective of fashion design and fashion design education.

Keywords*: design thinking, human-centred design, fashion design process, reflective analysis*

Introduction

This paper departs from a theoretical discussion of design thinking and human-centred design. The discussion then shifts to the findings of international protocol studies on novice engineering and industrial design students and their approach to the design process. Thereafter, the paper contextualizes a creative design project attempted by first-year fashion design students. Guided by the research question (how novice fashion design students approached a human-centred design project), the paper then focuses upon my reflective analysis, as a fashion design educator, regarding the design methodology employed by novice fashion design

students in identifying a design problem and the needs of human beings within a community. Drawing from my reflective analysis, I elicit comparisons with international protocol studies.

Design thinking and human-centredness

The notion of design thinking is an extremely broad-based multifaceted phenomenon with no single definition; this is due to the contrasting perspectives of several design theorists. Within, for example, a cognitive process paradigm, design thinking is positioned within questions pertaining to how designers work, how they frame problems and the co-evolution of complex problems and solutions. Cross (2006, p. 18), expanding on the ideas of philosopher Peirce, states that designers exercise abductive thinking in contrast to deductive or inductive thinking. Peirce (cited in Cross 2006, p. 18) argues that 'deduction proves that something must be; induction shows that something is operative' while abduction denotes that 'something may be'. Adams, Daly and Mann (2011, p. 588) postulate that design thinking epitomizes 'what designers understand about design and how they go about the act of designing based on this understanding'. Buchanan (1998, p. 13) puts forward his interpretation of design thinking in the form of a matrix describing design, both in theory and practice, in four broad themes or orders: communication, construction, strategic planning and systemic integration. Buchanan (1995a; 1998) relates these orders to specific abilities: inventing, judging, deciding, and evaluating.

Moreover, Tonkinwise (2011, p. 534) asserts that design thinking denotes a co-evolution of 'problem-definition/solution-proposition'. Dorst (2011, p. 522) takes the position that design thinking is the manner in which designers 'create frames' to address open, multifaceted problems. Beyond that, Cross (2006; 2007; 2008; 2011) maintains that within the design thinking framework, a designer's performance is a set of interacting ideas confronting ill-defined problems and a solution-focused strategy.

Cross (2006, p. 20) argues that designers tackle broad-based, 'ill-defined' (as opposed to 'well-defined'), real-world design problems with the intention of finding solutions rather than solving problems. Rittel and Webber (cited in Cross 2007, p. 23) advocate that design problems are widely perceived as 'ill-defined, ill-structured, or wicked'. Design problems are wicked since they are 'ill-formulated, where all the information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing' (Rittel cited in Buchanan 1995b, p. 14). Cross (2006, p. 20) expands on the notion that design problems are ill-defined, ill-structured, or wicked because some of the essential information concerning the problem is unavailable. Furthermore, these broad-based problems are not 'susceptible to exhaustive analysis' and, as a result, an ultimate unerring solution is not warranted (ibid).

It is evident from the above that design thinking is viewed from different lenses. However, linked to the notion of design thinking, is the zeitgeist movement towards human-centred design. At the 2000 DEFSA Conference, keynote speaker and design theorist Dr Richard Buchanan (2000) recognized, in the powerful opening address arguments put forward by former and late South African Minister of Education Dr. Kader Asmal, a new form of design thinking, a philosophy that positions human begins as the nucleus for design. According to Buchanan (2000), Dr Asmal's address conveyed an influential message that design, within the South African context is rooted in purpose, values, society, human dignity and human rights. Buchanan (2000) refers to this ethos as human-centred design, an affirmation of and incessant support and improvement of human dignity. Corresponding to human dignity, human rights and human needs, several authors (Buchanan 2001; Amir 2004; Brown 2008; Koskinen, Zimmerman, Binder, Redström & Wensveen 2011; Chmela-Jones 2011) confirmed a metaphysical positioning of human-centredness as a disposition for design.

Having theoretically positioned both design thinking and human-centred design, this discussion now moves to global protocol studies regarding the activities and approaches to design employed by novice engineering and industrial design students.

International protocol studies on design process

Similar to the broad-based complex nature of design thinking, the ontology of design processes discloses contrasting perceptions; this is despite the fact that there have been numerous attempts to model the design process (Cross 2008; Lawson 2010). Lawson (2010, p. 33) postulates that the common facet between design process models/maps is a 'sequence of distinct and identifiable activities which occur in some predictable and identifiable logical order'. Some design process models simply 'describe' the activities associated with designing while others 'prescribe a better or more appropriate pattern of activities' (Cross 2008, p. 29). Several sources (Cross 2001, 2008; Aspelund 2010; Lawson 2010) concur that the design process occurs in an ad-hoc, unsystematic and non-linear process with iterative feedback loops between activities. Despite the divergent standpoints on the design process, individual student designers approach their design processes in a particular manner.

Cross (2011, p. 120) notes that in studies of 'successful and unsuccessful teams of student industrial designers', Rianne Valkenburg and Kees Dorst established that;

> The successful team developed a sequence of five framing concepts during the project, in contrast to the single frame used by the unsuccessful team. And the unsuccessful team spent much greater amounts of time on naming activities – i.e. on identifying potential problem features, rather than on framing and developing solution concepts.

In another protocol study on novice and advanced industrial design students, Henri Christiaans and Kees Dorst (cited in Cross 2011, pp. 120-121) ascertained that some students become over-involved with information gathering instead of continuing with the solution generation phase. However, novice students 'did not gather a lot of information, and tended to solve a simple problem' un-mindful of several 'potential criteria and difficulties' (ibid).

Henri Christiaans (cited in Cross 2011, p. 130) in his protocol studies with industrial design students sectioned student activities into three modes: information gathering, sketching, and reflecting. Christiaans noticed that, in generating creative design concepts, students who displayed 'evidence of rapid alternation between the activity modes' were more successful (ibid). Protocol studies on engineering design students conducted by Cindy Atman and colleagues (cited in Cross 2011, p. 144) established that those novice students who expended 'a large portion of their time defining the problem' did not actually generate 'quality designs'. Additionally, these novice students 'became stuck in problem- definition and did not progress satisfactorily into further stages of the design process' (ibid). Cross (2011, p. 144) proposed that, in 'studies of problem solving, novice behaviour is usually associated with a depth-first approach' implying that the novice recognizes a problem and instantaneously initiates in-depth solution exploration.

A creative design project for novice fashion design students

Drawing upon the theoretical discourse of design thinking and the design process, the metaphysical positioning of human-centred design and protocol studies on novice industrial and engineering design students, I set forth, as a fashion design educator, to develop a creative design project for first year fashion design students. The design brief – and the students' projects which illustrate their design process – remain the property of the institution and, for ethical reasons, were not included in this paper.

This design project assumed a human-centred methodology as the core for design products with a three-fold aim. Firstly, the design project intended to create a culture and awareness of human beings and their needs as a driver for fashion design. Secondly, the project aimed to explore the design process of novice fashion design students pertaining to their activities and how they framed a design problem based on human needs within a community, in an attempt to find the best possible solution. Thirdly, the design project sought to establish whether the design process of novice fashion design students paralleled (or did not parallel) results found in international protocol studies.

I sectioned the design process for this project into four modes of student activities. In the first activity mode, students selected a community and communicated their selection in an oral presentation which also included a statement of their intended information gathering methodology and discussion of any ethical considerations that they would take into account. The second activity saw students depart into the field to interact with community members to gather empirical data for problem-identification and identification of a human design need. In a written report, students described the context of the community and identified a problem or design need. Thereafter, the third activity involved students engaging in what I refer to as the conceptual development phase of the design process. This phase required students to think aloud in the form of visual representations comprising a series of conceptual sketches and drawings taking into consideration design elements, design principles and the design problem or human need. Conceptual development stages are imperative in any design process given that designers use drawings or sketches to show their thinking process and use these as a tool to communicate their design concepts (Cross 2006, pp. 34-35). The final activity required students to produce a final concept drawing of a design solution generated via iterative feedback loops between problem-identification and conceptual development. Given the current structure of the first year fashion design curriculum, the final design solution could not undergo the technological process of manufacture.

Methodology

To support my reflective analysis, I employed a qualitative research design since I was interested in exploring and understanding the situated activities of students and how these novice fashion design students approached a human-centred design process. Beyond that, I was interested in comparing my reflective analysis regarding the design process of novice fashion design students with findings from international protocol studies carried out with novice industrial and engineering design students. Stake (2010, pp. 13-16; 26) endorses the fact that qualitative research is situational, and that it is involved in understanding how things work, how activities take place and in comparing occurrences.

As a method of data collection, I made detailed notes on student activities and their design process methodology for the duration of the design project. These detailed notes remain the cornerstone of my reflective analysis as a fashion design educator. Denzin and Lincoln (2011, p. 417) confirm that ‘personal experience reflects the flow of thoughts and meanings’ of situations.

Having outlined the qualitative design methodology employed, the focus of this paper now shifts to my reflective analysis, as a fashion design educator, concerning the design process of novice fashion design students. Following that, I compare my reflective analysis to the findings of protocol studies conducted with novice engineering and industrial design students.

Reflective analysis

I reflect on the design process of novice fashion design students as per the four activity modes discussed above: 1) presentation and communication of ethical considerations, 2) textual report, 3) conceptual

development and 4) final design concept solution. To support this discussion, I use italicized quotations from my detailed notes.

My several years of experience as an educator led me to believe that novice fashion design students repeatedly design products based on their preconceived assumptions and dispositions. Transformation in mind-shift by creating a culture and awareness of human beings and their needs as a driver for fashion design was one of my intentions with this particular creative design project. I was of the opinion that these novice fashion design students would resist an ecological view of human beings as the focus for design. Presentations, in the first phase of this project, elicited students' evinced enthusiasm with the methodological approach of human-centred design. This point is supported by my own reflection that this *project is interesting and exciting as it creates opportunities to work with different people*.

The possibility exists that this design project allowed students opportunities to engage with communities and human beings as opposed to the constraints of a classroom or studio learning environment. Beyond that, students appeared to support a human-centred design process approach perhaps because they became aware of and recognized the value in design for purpose. This is evident in my reflection on students' comments that *now we understand what it means to design with purpose and we need more projects like this*. The notion of design with purpose is in line with Buchanan's (2000) claim that design within the South African context is rooted in purpose, values and society.

Reflecting on the student presentations, it was clear that their community selections were meaningful. *Homeless citizens, orphanages, informal garbage collectors and schools* were some of the identified communities. Students communicated their planned information gathering methods to identify and frame the design problem or human need within these communities. The themes of communication and strategic planning are in line with Buchanan's (1998, p. 13) interpretation of design thinking, as noted earlier. Planned information gathering methods could evolve but the proposed data collection methods served the purpose of guidance to students given that they were novice fashion designers.

In addition, *students appeared to lack an understanding regarding ethical considerations* perhaps because they were novice students. To ensure design problem identification and ethically sound data collection, I engaged in discussion with individual students rendering guidance and alternative solutions regarding ethical consideration. An example of ethical issues discussed involved data collection with minors. In my notes, I reflected that *this community is an orphanage so children cannot be interviewed – perhaps interview the caregivers* and this was then discussed with the students concerned.

With regard to the second activity, in some instances, students changed their community for logistical reasons: the data gathered did not yield sufficient information or accessibility to the community posed complications. Reflecting on this phase, students seemed to become mired in identifying and framing the design problem and gathering information. *Too much of time approaching members of the community, interviewing them and gathering empirical data*, I reflected at the time. In addition, evidence presented in the textual report did not generate rich, thick description given that students did not give cognizance to design elements and principles in the information-gathering phase. I had reflected, in my notes, that *the textual report has very little or no information about the design elements and principles*. This suggests that students embraced a depth-first approach as opposed to a exploring the breadth of the problem. This is in line with Cross's (2011, p. 144) afore-mentioned findings, in studies of problem solving, where novices identify a problem and usually adopt a depth-first approach immediately beginning with in-depth solution exploration.

Since students became fixated on problem identification and information gathering, the conceptual development phase of the design process did not elicit successful results. Although the conceptual

development phase did suggest a response to the design problem and need, students could not efficaciously carry out this phase because they lacked the cognitive ability to bring forth their design thinking in the form of a visual representation of a series of conceptual ideas, sketchers and drawings. Reflecting on this phase of the design process, in my view, students did not engage with iterative actions, alternating between and integrating activity modes, nor did they refine, evaluate and further improve their conceptual sketches and drawings. Indeed, in some cases, students merely *completed a series of final design solution concept drawings* and *selected one of these as their ultimate design solution*. In some cases, students purely *utilized a series of fashion related photographic visuals* without conveying their thinking process in a series of drawings and sketches. Beyond that, *little or no consideration* was afforded to *design elements and principles in conceptual development*. The clear lack of design thinking in conceptual development was evident.

In the final part of the design process, the final design concept drawing, students made little or no headway and lacked the ability to muster quality final design solutions. In some cases, I found that the design solution partially responded to the design problem but due to the possible dearth of rich information gathering and absence of knowledge, understanding and consciousness of design elements and principles, quality design solutions were not generated. In some instances, final design solutions could not lead to technological manufacture because the design solutions were impractical to manufacture as end-products. In one case, I reflectively observed that a *design solution is not functional because there are no fastening methods included*. This suggests that students worked in isolation with no integration of or thought given to technological methods. Beyond that, in certain cases, textiles selected for the final design solution were not appropriate to the design problem. An example of this could be found in my reflective notes: *the solution is a leotard that requires the use of a stretch fabric yet a non-stretch woven textile is used*. Material selection is a fundamental part of the design process and the ultimate design itself. This is in line with Cross's (2006, p. 9) claim that the design process incorporates the materials that would be suitable to attain the design concept.

Moreover, the absence of iterative feedback loops, integration and alternation between different activity modes was evident and may have been a contributing factor to unsuccessful final design solutions. Feedback loops and integration of activities is important to the design process, as evident in the fact that several sources (Cross 2001; Cross 2008; Aspelund 2010; Lawson 2010) concur that the design process occurs in an ad-hoc, unsystematic and non-linear process with iterative feedback loops between activities.

Comparative analysis

Drawing upon my reflective analysis of the activities and design processes of novice fashion design students, I compare these to protocol studies on novice industrial and engineering design students. A number of similarities, in design process and activities, exist but dissimilar results were also found. I elaborate on these similarities and differences below.

As mentioned earlier, Henri Christiaans and Kees Dorst in protocol studies on novice and advanced industrial design students (cited in Cross 2011, pp. 120-121) found that some students become too engrossed in information gathering. Despite this, Henri Christiaans and Kees Dorst (cited in Cross 2011, pp. 120-121) further note that novice industrial design students did not, in fact, gather a lot of information. In opposition, Cindy Atman and colleagues (cited in Cross 2011, p. 144) found, in protocol studies with novice engineering student designers, that students spent a large portion of their time on problem-identification and subsequently became stuck on this phase. My reflective analysis did not find the same results as that of Christiaans and Dorst's study, but it did generate similar results to that of Cindy Atman and colleagues seeing as novice fashion student designers expended tremendous time on problem-identification and gathering information even though it lacked rich, thick description.

Henri Christiaans and Kees Dorst (cited in Cross 2011, pp. 120-121) found that novice industrial design students were oblivious to numerous possible criteria and complications in information gathering. My reflective analysis revealed parallel results in view of the fact that novice fashion students demonstrated little or no awareness of design elements and principles in their information gathering.

Furthermore, as stated earlier, Cindy Atman and colleagues (cited in Cross 2011, p. 144) established that those novice engineering students who expended 'a large portion of their time defining the problem' and gathering information did not actually generate 'quality designs' and did not progress satisfactorily into further stages of the design process'. I concur with these findings for the reason that novice fashion student designers did not efficaciously advance with the conceptual development phase and did not produce high-calibre final design solutions to the problem.

Henri Christiaans (cited in Cross 2011, p. 130) in his protocol studies with industrial design students recognized that students who displayed 'evidence of rapid alternation between the activity modes' in generating creative design concepts were more successful. My exploration revealed that novice fashion design students did not reflect on the conceptual development phase of the design process, did not engage with backward-forward activities, did not alternate between and integrate activity modes, and did not refine, evaluate and further improve their design concepts; this appears to be in line with Henri Christiaans deductions.

Conclusion

In this paper, I set forth to engage with theoretical views on design thinking and human-centred design, and to deliberate upon my own reflections, as a fashion design educator, concerning the human-centred design process of novice fashion design students. This was done in order to compare my reflective analysis with that of protocol studies with novice industrial and engineering student designers.

Drawing upon the theoretical arguments, it remains evident that the ontology of design thinking is a broad-based multifaceted phenomenon with no lucid definition. The position of human-centredness implies that human rights, human dignity, human beings and their needs remain the core for design.

Based on my reflective analysis, it is evident that students were responsive to the methodological approach to this particular creative design project. However, novice fashion design students appeared to become mired in the problem-identification and information gathering phase and could not progress further with the design process nor could they produce quality designs. These results are, largely, similar to that of protocol studies on industrial and engineering student designers.

Drawing upon the design process of novice fashion design students, it is evident that there remains a gap between problem identification and solution generation. Furthermore, the absence of iterative feedback loops, amalgamation and alternation of different activity modes is apparent. Finally, consideration of design elements and principles does not support the information gathering, conceptual development and final design solution phases. Fashion design education has a fundamental role to play in addressing these gaps.

As a response to these voids, I propose that novice fashion design students ought to be educated and trained in a manner that interlocks different activity types of the design process in support of a non-linear, ad-hoc design methodology. Although acquiring drawing and artistic skills is important to creative design, in support of the co-evolution of problem and solution, I call for a culture of reflective activity, backward-forward action, moving between and consolidation of different activity modes within the design process. In so doing, it may be possible for students to refine, evaluate and further improve conceptual development and design solutions. In addition, I recommend more attention be given to the development of cognitive skills that enable students to

give rise to design thinking or conceptual development. Finally, fashion design students should have deeper theoretical knowledge and understanding of design elements and principles to assimilate this into quality design solutions.

I conclude with a position that fashion design and fashion design education could add value to human-centred design if opportunities are created for students to engage with communities, societal needs and design for purpose as opposed to designing to satisfy personal pleasure.

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SUSTAINING JOHANNESBURG'S FASHION DESIGN INCUBATORS: THE ROLE OF FASHION DESIGN EDUCATION

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Abstract

Internationally, design incubators have emerged as a result of clustering. These design incubators serve as artist studios, or as design centers providing opportunities for young emerging entrepreneurs to acquire studio workspaces located within a cluster of similar economic activities. In South Africa, design incubators, particularly fashion design incubators, have emerged in the Johannesburg Fashion District, situated within the central business district of Johannesburg.

Research conducted in 2006 established that there were a number of emerging fashion designers located within the Johannesburg Fashion District design incubators. However, interviews conducted in 2012 revealed that the number of fashion designers positioned within these design incubators had declined. This paper contextualizes the fashion design incubators within the Johannesburg Fashion District and deliberates the reasons for this decline. The paper then moves on to discuss the fundamental role of fashion design education in sustaining these fashion design incubators. The paper pursues a qualitative research paradigm employing semi-structured interviews with business stakeholder participants affiliated with the fashion design incubators. A content method of data analysis categorized the raw data into themes. Two major themes emerged, namely, the factors contributing to the decline mentioned above, and the role of fashion design education.

Given that fashion design incubators may support economic development and the sustainability of the fashion industry, fashion design education could play a central role in sustaining these design incubators. As such, this paper contributes to the development of sustainability within the fashion sector and the discourse of fashion design education within a South African context.
Keywords*: fashion industry, design incubators, fashion design education*

Introduction

This paper offers an account of the empirical findings of a research inquiry undertaken in 2012. The paper elaborates on the factors that have contributed to the decline of Johannesburg's fashion incubators and the role, within the South Africa context, of fashion design education in sustaining these incubators. I begin the paper by drawing upon literature and empirical evidence to contextualize fashion incubators, both internationally and within Johannesburg. Thereafter, the methodological approach is discussed before the findings of this research inquiry are presented. The paper concludes with a summary of the findings and recommendations.

Clustering is a term that denotes designated spaces of networks of specialized and related businesses and activities (Scott 2004; Hall cited in Gilbert 2006). Within these clusters, incubators serve the purpose of 'artist studios, or as centres for design', offering opportunities for small entrepreneurs to charter workspaces equipped with machinery and specialized equipment (Landry 2000, p. 123; Kruz 2010). Kuratko and Hodgetts

(cited in Kruz 2010, p. 33) advocate that incubators are enterprises with studio spaces for rent with pliant terms and cheaper rates. Furthermore, Burnett and McMurray (2008, p. 61) express the view that incubators function as a 'catalyst for business growth, and … as a bridge between the internal protected incubation environment and the external exposed business environment'.

International research indicates that design incubators have emerged in countries such as Toronto, London, Rotterdam, New Orleans, Borås and Stockholm (Kruz 2010, p. 34). For example, Mills (2008, p. 22) mentions the New York-based Pratt Design Incubator for Sustainable Innovation affiliated with the Pratt Institution. Although the Pratt Design Incubator for Sustainable Innovation accommodates various design offerings, some design incubators specifically focus on the praxis of fashion design. Such examples of fashion-specific incubators include the Textile and Fashion Factory in Borås, Sweden in conjunction with the Swedish School of Textiles (Kruz 2010, p. 37). A further example is a fellowship research centre funded by Skills Victoria for the Australian fashion sector. In addition, Walsh (2009, pp. 16; 18) identifies the Centre of Excellence, Design and Textile Incubator in Huddersfield, United Kingdom and the Fashion Design and Technology Centre for Fashion Enterprise affiliated with and originally set up as an incubator for graduates from the London College of Fashion. This last example elucidates, from an international perspective, the fact that collaboration between higher education institutions (HEIs) and design or fashion-specific incubators does indeed exist.

In South Africa, a similar fashion incubator, located in SewAfrica House in the downtown Johannesburg Fashion District, has materialised. The Johannesburg Fashion District is a regeneration initiative undertaken by the City Council of Johannesburg (Cachalia, Jocum & Rogerson 2004; Rogerson 2006). Under the mandate of the City Council of Johannesburg, the Johannesburg Development Agency coordinated and managed economic and regeneration projects in the Johannesburg City including the fashion district (Johannesburg Development Agency [n.d.]). Although forming part of the fashion district, the Johannesburg fashion incubators are privately owned, funded and managed by an individual business entity.

Affording emerging fashion designers the opportunity to rent studio space furnished with focussed equipment, machinery, exhibition spaces and dressing facilities was the vision of the Johannesburg fashion incubator (Rogerson 2006, p. 226). Accordingly, stakeholders from SewAfrica House (cited in Rogerson 2006, p. 226) postulate that the incubators create a preparatory point from which young fashion designers can launch their career in the fashion industry. Interviews conducted by myself in 2012 with business stakeholder participants from the Johannesburg fashion incubator, substantiate the fact that creating affordable studio spaces for young fashion designers who were unable to afford the luxury of large rental fees was the vision for the establishment of the fashion incubators. This vision also entailed generating spatial positions for young graduate fashion designers to enter the fashion industry environment upon graduating from HEIs.

The location of the fashion incubators, within the cluster of the Johannesburg Fashion District, manifests numerous benefits for young fashion designers. According to Rogerson (2006, p. 226), stakeholders from SewAfrica House advocate that the fashion incubators make available the added advantage of being located within a cluster of similar activities. Malatse (cited in Rogerson 2006, p. 233) notes that fashion designers situated in the cluster of the Johannesburg Fashion District benefit from 'agglomeration economies and are more advanced in terms of their business development than those operating outside of the cluster'. Moreover, incubator residents have access to the Fashion Kapitol, a space where fashion designers can showcase their artefacts. The Johannesburg Development Agency ([n.d]; 2011) confirm that the Fashion Kapitol in the Johannesburg Fashion District comprises various shops and boutiques, offices and studio space, a restaurant, a small square, an outdoor fashion ramp, and an amphitheatre. In light of this discussion, it is apparent that the Johannesburg fashion incubators provide spatial opportunities for young fashion designers to work from, meet with clients coupled with the prospect of networking and wider target market engagement.

In 2006, Rogerson, in a national research project, quoted interviews with twenty resident fashion designers positioned within Johannesburg fashion incubators. Drawing from this empirical research, it is clear that twenty, perhaps more, fashion designers were resident in the Johannesburg fashion incubators. However, in 2012, I conducted interviews with business participants linked with the fashion incubators and found that only two fashion designers remain. This declining number of residents implies that the Johannesburg fashion incubator has undergone degeneration. My interviews revealed that this decline in fashion incubator occupants transpired over a four year period, and that 2010/2011 saw the most severe decline.

In the section that follows, I elaborate on the methodological approach taken towards data collection and analysis in exploring the reasons for the decline of the Johannesburg fashion incubators and the fundamental role of fashion design education in supporting these incubators.

Research design and methodology

For the purposes of this research, a qualitative research design was followed. Merriam (2009, pp. 5-6) states that qualitative researchers are concerned with understanding the social and cultural contexts of people's lives, how they come to construct meaning and interpret their experiences. A qualitative research design was applicable given that I set out to understand the context of the Johannesburg fashion incubators, the difficulties that contributed to the decline thereof and the fundamental role of fashion design education with the purpose of supporting the sustainability of these fashion incubators.

In line with a qualitative research design, I employed open-ended, face-to-face semi-structured interviews with two business and manager stakeholder participants associated with the Johannesburg fashion incubator. This type of interviewing was considered appropriate given Babbie's (2001, p. 240) assertion that open-ended interviewing allows opportunities for participants to answer as they deem fit, and given Kvale and Brinkmann's (2009, p. 130) argument that semi-structured interviews allow for guided thematic topics to be addressed.

I conducted these interviews in the participants' natural setting and covered two thematic topics, namely reasons for the decline of the fashion incubators and the function of fashion design education. These interviews where captured via a digital recorder and transcribed verbatim. The textual raw data from the interviews were then analyzed and interpreted employing content analysis which categorizes content into themes and categories (Burns 2000; Henning, Van Rensburg & Smit 2004). The raw data was arranged into two overarching themes, namely, the decline of the Johannesburg fashion incubators and role of fashion design education.

Decline of the Johannesburg Fashion Incubators

Within this broad theme, four sub-themes emerged, all of which speak to the challenges that contributed to the degeneration of the Johannesburg fashion incubators. These sub-themes are: 1) spatial positioning and economic and social challenges, 2) the attitude of incubator fashion designers, 3) skills and knowledge deficiency, and 4) funding and partnerships.

Spatial positioning and economic and social challenges

The spatial positioning of the Johannesburg fashion incubators within the inner-city of Johannesburg posed a major challenge. There remains a perception that the inner-city of Johannesburg is unsafe and afflicted with numerous socio-economic dilemmas.

Security in the Johannesburg Fashion District presented significant challenges resulting in twelve-hour, day-time operational access to the fashion incubators. Such limited and uncompromising operational hours did not

allow tenant fashion designers the flexibility of longer working hours. In light of this confined accessibility, a number of fashion designers departed the fashion incubators and relocated to alternative sites in surrounding areas with twenty-four hour safe access.

In addition, from an economic perspective, the location of the fashion incubators did not entice the more affluent, higher-income target population who preferred to venture into neighbouring suburban areas such as Sandton, Rosebank and Parkhurst. Furthermore, those economically powerful clients who were inclined to visit the fashion incubators were stymied by the prevalent absence of secure parking facilities in the Johannesburg Fashion District. In view of this, incubator fashion designers were not able to reach the economic majority and, instead, were predominately exposed to lower income target markets that did not have the capital to engage in the purchase of luxury fashion artifacts. As a result, resident incubator fashion designers were susceptible to significant economic pressures leaving them in a position where they were unable to fund the production of their artifacts, as they required the capital they had to address more basic survival needs, such as food.

Linked to these economic challenges, the social dilemma of prostitution in the surrounding area of the fashion incubators and the semiotic neighbourhood of the inner-city Johannesburg Fashion District fostered a further drawback. By day the fashion district is a retail environment but by night the city's landscape changes to a non-affluent residential area lined with prostitution. Given the biased belief that where prostitution occurs, danger exists, fashion shows and evening events could not be held at the Fashion Kapitol. Although the Johannesburg fashion incubator's vision, as mentioned earlier, was for residents to have access and a platform to exhibit their work, the inability to host nightly events in the Fashion Kapitol resulted in fashion shows and fashion weeks occurring in more affluent areas that drew in retail buyers and a more economically attainable customer base.

These spatial, economic and social challenges resulted in incubator fashion designers relocating into more competitive surrounding neighbourhoods such as Juta Street in Bramfontein and Arts on Main on the outskirts of the Johannesburg inner-city.

Attitude of incubator fashion designers

Providing space equipped with specialized machinery and equipment was the planned purpose of the fashion incubators. However, over time, this machinery was abused by resident fashion designers and the high cost of maintenance of this machinery far surpassed expectations.

Additionally, interviews revealed that resident fashion designers lacked an understanding of the fact that, in order to survive under fluctuating economic conditions, hard work and determination remain key ingredients. Interviews revealed that many resident fashion designers were more attentive to the fame and grandeur of showcasing their artifacts on the fashion ramp as opposed to commitment, diligence and engaging in hard work. Beyond that, while incubator fashion designers may have harboured notions that they were entrepreneurs, they lacked the entrepreneurial spirit to invest time and effort in securing contractual agreements with potential clients. The fact that Johannesburg fashion incubator residents viewed themselves as entrepreneurs contradicts the view of Kruz (2010, p. 25) who notes that many designers do not consider themselves as entrepreneurs.

Furthermore, the participants in this study confirmed that many tenant fashion designers were more drawn to abiding by international fashion trends as opposed to creating a sense of personal identity in design and addressing the needs of localized target markets. Incubator fashion designers appear to have designed artifacts for personal gratification and corresponding to what they believed apt for the target market as

opposed to recognizing the requisites of the target market that could possibly support financial growth in terms of generating sales.

Skills and knowledge deficiency

Based on their tertiary education, incubator fashion designers possess the knowledge, skills and competencies in design and the technical know-how to manufacture clothing artifacts. However, they are deficient when it comes to business, marketing and entrepreneurial knowledge and the practical application thereof. This lack of business, marketing and entrepreneurship acumen is not only evident in South Africa. Kruz (2010, p. 26) generated similar findings in research conducted with Swedish fashion designers and industry experts. The literature does confirm the need for the development of business skills amongst fashion designers (Andrews 2011; Chapman 2011).

Incubator fashion designers did not have the capability to furnish design concepts that were specifically market generated. They did not understand or recognize the shifts in market demands or what the market required. This lack of target market understanding is probably the reason why resident fashion designers were unable to market and establish themselves within the right target market. A lack of understanding of the target market made it difficult for incubator fashion designers to translate design and technical skills into economically viable artifacts. Beyond that, these fashion designers were found to have predetermined assumptions and dispositions regarding the economic and social context in which design artifacts are produced, thus leading to unrealistic costing of clothing products which far surpassed what the target market could afford.

Another prevalent contributing factor to the decline of the Johannesburg fashion incubators was the conceptualization and integration of knowledge, skills and competencies obtained from tertiary education into real-world socio-economic conditions. Prior to their entrance into the fashion incubator, interviews confirmed that tertiary education provided little or no exposure for fashion students to engage with real-world contexts, to make mistakes and solve problems. In light of this, I established that incubator fashion designers were not sufficiently educated with regard to problem solving skills due to the fact that their tertiary education provided little or no opportunity for the integration of discipline-specific knowledge, skills and competencies coupled with problem-solving skills in real-world situations. As a result, resident fashion designers had no experience with real-world engagement, little opportunity to make mistakes and learn from them with the intention of finding the best possible solution.

These aforementioned deficiencies in knowledge, skills and competencies hindered the success of incubator fashion designers.

Funding and partnerships

As discussed earlier, international research suggests that design and fashion incubators are associated with higher education institutions (Mills 2008; Walsh 2009; Kruz 2010). Cachalia et al (2004, p. 540) confirm that a partnership did exist between the former Technikon Witwatersrand, currently known as the University of Johannesburg. Deducing from my findings, the intention of this alliance with the University of Johannesburg was to allow Baccalaureus Technologiae fashion student designers with the opportunity to acquire residency space at the fashion incubators while engaging with formal qualifications. My findings revealed that this collaboration between the fashion incubators and the University of Johannesburg no longer exists.

The non-existence of an affiliation with a higher education institution contributed to the decline of the Johannesburg fashion incubators. This problem was exacerbated by funding and subsidization challenges. As

noted earlier, the Johannesburg fashion incubator is a privately owned, funded and managed business endeavour without any capital from government, industry or any other stakeholders. Funding, rental subsidization for tenants and sponsorships were never forthcoming for operational resources, maintenance or administration for the Johannesburg fashion incubators. Due to the absence of funding, personnel with the sole responsibility of managing the fashion incubators were not employed and administration thus became the responsibility of the individual private funder.

In contrast to the funding situation evident in the Johannesburg fashion incubators, Kruz (2010, p. 37) notes that the Textile and Fashion Factory incubator in Borås, Sweden is funded by 'government, communities and various other partners', and Walsh (2009, p. 17) affirms that product development in the Centre of Excellence Design and Textile Incubator in Huddersfield is sponsored by the Yorkshire Fashion Week. In another international case, Walsh (2009, p. 19) notes that the London-based Fashion Design and Technology Centre for Fashion Enterprise has 'access to large scale investment from industry' and assigns high levels of funding to its resident fashion designers.

The above cases suggest that international fashion incubators receive various forms of financial support from government, industries and fashion related organizations. Kuratko and Hodgetts (cited in Kruz 2010, p. 33) indicate that residents of incubators 'receive financial, managerial, technical and administrative support services' with modest rental fees or in some cases no leasing payment. Kuratko and Hodgetts (cited in Kruz 2010, p. 33) further postulate that the incubation period is 'limited from two to five years with the purpose to increase the chances of survival for small start-up companies'. Residents of the Textile and Fashion Factory incubator in Borås have free rental space for a one year period with a minimal fee in the second year of incubation (Kruz 2010, p. 38). Beyond that, Kruz (2010, p. 38) affirms that financial sponsorships are available to resident fashion designers to fund production, fashion shows or expositions. This international practice stands in opposition to the Johannesburg fashion incubator situation given the dearth of funding and lack of rental subsidization. These factors appeared to stymy the incubation period of resident fashion designers and manifested in the decline of the incubators.

The role of fashion design education

The previous section highlighted challenges that led to the decline of the Johannesburg fashion incubators. In this section, I examine the role of fashion design education in South Africa in sustaining the Johannesburg fashion incubators.

Scarcities in business, marketing and entrepreneurship manifested in the deterioration of the Johannesburg fashion incubators. A need for fashion curriculum content to focalize the development of business, marketing and entrepreneurship among student fashion designers was found. However, theoretical knowledge in business, marketing and entrepreneurship necessities the translation and fusion of this knowledge into practice so as to support deep learning as opposed to attaining surface theoretical knowledge. Interviews confirm that generic understanding of entrepreneurship in real-world contexts does not suffice and there is thus a need for fashion design education to integrate theoretical components into authentic hands-on retail experience. In order to produce fashion graduates who are capable of engaging with target market population groups and who come to better understand the target market and shifts in commercialized demands, the curriculum content of fashion design could consolidate theoretical and empirical research for better articulation into real-world working environments.

In addition to the above, findings suggest that fashion design education does not adequately equip students to integrate curriculum content into real-world socio-economic situations. Graduate fashion designers were found to have knowledge and skills in design and technical aspects, but their education and training did not provide any tangible hands-on experience nor did it provide any opportunity for the application and

consolidation of knowledge in real-world milieus. Opportunities to enable student fashion designers to obtain experience by engaging with the socio-economic conditions of real-world situations may foster greater ability and experience with addressing errors, experimentation, evaluation, and refinement in designed artifacts. Coupled with this, there remains a need for fashion design education to foster the development of problem solving skills within real-world frameworks. This is because it was established that incubator fashion designers were not trained in this area. It is the role of fashion design education to generate opportunities for students to practice problem solving in authentic situations.

Finally, drawing from the findings of this study, the sustainability of the Johannesburg fashion incubators requires a three-pronged partnership model between the incubator, HEIs and large organizational entities such as retail organizations. Interviews established that coalition with HEIs could be favourable in terms of postgraduate studies. Such an association could perhaps not only sustain the fashion incubators but also support research capacity development for HEIs. Empirical findings suggest that the fashion incubators could serve as a by-product for academic research thus becoming centres of excellence that foster a culture of practice-based research for postgraduate fashion students. One interview participant recommended that registered postgraduate fashion students could engage with research projects that inform praxis and this practice could be carried out in the form of a residency at the fashion incubators. This proposal is consistent with Kruz's (2010, p. 33) assertion that university-affiliated incubators act as a 'spin-off for academic research projects'. Kruz (2010, p. 43) also found that collective partnerships between universities and incubators are mutually beneficial because incubators are 'highly knowledge extensive environments'. In light of this, a symbiotic partnership between the Johannesburg fashion incubators and fashion design education could be advantageous to both entities.

Conclusion

Empirical findings suggest that over a four year timespan, the Johannesburg fashion incubators witnessed degeneration in the number of fashion design residents. This paper set out to elucidate the challenges that manifested in the decline of the Johannesburg fashion incubators and the role of fashion design education in sustaining these incubators.

The spatial position of the incubators within the Johannesburg inner-city fashion district and the economic and social predicaments surrounding the district were major factors in this decline. The outlook of the incubator fashion designers coupled with their knowledge and skills deficiency supported this deterioration. Finally, the lack of capital support for the incubators and non-existent partnerships with HEIs presented supplementary contributing elements.

To sustain the Johannesburg fashion incubators, fashion design education can play a fundamental role by preparing student fashion designers with adequate business, marketing and entrepreneurial knowledge, skills and praxis coupled with problem solving skills for real-world contexts. The consolidation of fashion design curriculum content into practical real-life situations was also considered necessary. Additionally, reciprocal constructive partnerships between HEIs and the fashion incubator were essential and could support and develop postgraduate research.

I conclude with a call for fashion design education and training to provide opportunities for fashion students to engage with empirical research immersed in real-world socio-economic situations that may inform the practice of design projects. The Johannesburg fashion incubators provide a lucrative site for academic and practice-based research; it is thus recommended that HEI's develop partnerships with such incubators.

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GREEN SCREEN: THE ACTOR'S CHALLENGE

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Abstract

Introduction

The design options in the contemporary computerised era, lead to the digitised manipulation of proposed reality. Green screen is a technique used within film/television and permits compositing and manipulation of the proposed reality. This allows the filmmaker and the virtual designers to substitute the green screen area with whatever designed 'environment' the filmmaker desires. The challenges this pose to actors in being congruent with and thus creating (photo)realism in the designed world of the green screen is yet to be delineated and circumvented. When this technique is implemented it substantially limits the range of stimuli which the actor receives to feed his belief in the proposed circumstances and his behaviour. Such stimuli are crucial within the acting moment. Therefore within the green screen environment the actor has to imagine and experience that which will supplant the green screen and not the green screen itself – the end manipulated designed world. Within the field of acting, the principles and strategies of Stanislavsky's System – specifically his notion of the magic if - can assist the actor to successfully portray a character within an imagined environment. Acting reflects human behaviour and implements the body/mind paradigm to navigate the acting moment. Recent discoveries within the field of cognitive neuroscience have increased the understanding of human function and behaviour and substantiated Stanislavsky's notion of the magic if. However these discoveries have not been implemented within the green screen environment. Based on existing cognitive neuroscientific knowledge regarding acting, the magic if, imagery and the body/mind paradigm, we hypothesise that a strategy can be developed which will assist the actor in circumventing the challenges of green screen acting and promote verisimilitude within the designed world.

Method:
This paper is based on a qualitative approach and includes knowledge from books, articles, and internet sources. These sources include behind-scene-footage of films incorporating green screen. This type of research into the notion of magic if, substantiated by cognitive neuroscience with regards to the challenges posed by the green screen environment, assists in the theoretical development of acting explorations and an acting strategy to successfully navigate the green screen environment. In essence the demands of the green screen environment, the strategies of the magic if as an acting theory and practice, and the search for scientific validity through cognitive neuroscience of the magic if were triangulated

Results:
The cognitive neuroscientific investigation into the magic if and all its pertinent components allowed for the development of science-substantiated acting explorations which possibly enhance the actor's skills which he needs to utilise when working with green screen, as well as a science-based acting strategy which the actor can implement when faced with the green screen.

Conclusion:
Cognitive neuroscience provided the validity of the magic if approach, and then strongly suggested ways of expanding and using this strategy in acting for green screen. This forms a scientific basis for further empirical research in this domain.

Keywords*: Green screen, Acting, Magic if, Cognitive Neuroscience*

Introduction

The contemporary computerised era permits the designer to digitally manipulate reality. Specifically within film and television the filmmaker incorporates this manipulation to place the actor within various environments and situations that are made possible through the use of advanced computer technology. This designed environment requires congruent character interaction. Green screen[9] technology, facilitates digital manipulation, yet limits or eliminates the external stimuli needed by the actor to achieve *scenic faith*, which is the actor's ability to 'believe' in the fictional world (Vakhtangov 1983, p. 141).

This article foregrounds the importance of congruency between the actor and visual effects and defines green screen technology with specific reference to the actor's role and challenges. It provides a possible solution by incorporating Stanislavsky's *magic if*, which requires the actor to ask himself 'What if' the proposed circumstances were true (Stanislavski 2010, pp. 52-54). The *magic if* assists the actor in achieving *scenic faith* (Stanislavsky 1967, p. 430). This article discusses recent discoveries in cognitive neuroscience to substantiate the implementation of the *magic if* to circumvent the challenges created by the green screen environment. The study provides a possible strategy to the actor to circumvent the challenges created by this technique.

Body

This article reports on a qualitative research project and utilises knowledge gained from a critical engagement with published scholarship and media sources. Behind-scene-footage of films implementing green screen technology was used. The triangulation of green screen, the *magic if* and cognitive neuroscience culminated into the development of explorations and strategies which could enhance the actor's skills when entering the green screen environment.

The Actor, visual effects and the green screen

In contemporary film and television the elaborate use of visual effects can be seen in works such as *Avatar* (Cameron 2009), *Once Upon A Time* (2011-), *Oz the Great and Powerful* (Raimi 2013), and even in works not considered to be visual effect works such as *CSI: NY* (2004-) and *Grey's Anatomy* (2005-). The importance of the actor being congruent with visual effects which forms part of the designed reality is critical. The visual effects team aims to create the vision of the filmmaker (Finance & Zwerman 2010, p. 37), while the actor endeavours to achieve the same vision through his acting. Barker and Austin (2000 p. 171) argue that special effects have to persuasively represent the diegetic world or "realistic fictional world" and be narratively cohesive, which allows the spectators to have faith in the diegetic world and to associate with the characters and their predicaments. Without congruency between the actor's character and the designed world, the narrative diegetic world will break down and destroy the (photo)realism of the effects. Keane (2007 p. 74) suggests that such a lack of congruency is visible in *The Lord of the Rings: The Two Towers* (Jackson 2002) when the CG character of Gollum seems weightless in a fight with the character Sam (Sean Astin). Here the lack of congruency between the real-life actor (Astin) and the CG character (Gollum) negatively influences the diegetic realism.

[9] Both the colours green and blue can be used; it depends on the colour and content that needs to be replaced as replacing that colour will replace all corresponding colours of the scene (Ryan Connelly in *Film Riot*, 2010).

Contemporary visual effects are mostly constructed by digital technology which has the capacity to manipulate images (Keane 2007, pp. 44, 61). Digital compositing within visual effects constructs a new image by altering and merging pre-existing images, where the goal of the constructed new image is to be perceived as if it was shot in the same conditions with one camera (Brinkmann 2008, p. 2). Each image that needs to be composited into a final composition can be seen as a layer. When the composition is complete, the separate layers or components become a single indivisible image or "stream" (Manovich 2002, p. 139). These composites can be comprised of an unlimited number of layers, which determine the complexity and cost of the images (Finance and Zwerman 2010, pp. 16-17). This illustrates the countless components that might be added after filming and which the actor has to incorporate into his imagination while shooting the scene.

Green screen technology or *matte processing* facilitates this process and permits the filmmaker to film the actor in front of a green screen and in post-production, substitute the green with whatever environment the filmmaker wants (Hanke & Yamazaki 2009, p. 2). Jeff Foster (2010, p. 13) frames the green screen procedure as follows:

> The blue or green screen production process is primarily made up of three elements: the foreground subject, the colored screen background, and the target background that the subject is composited into…the matte is generated from the background color on original film or digital video footage and composited digitally through hardware or software applications…

Different uses of green screen

Green screen technology may be used for digital set extension. Here the screens are combined with existing set pieces, as demonstrated in the mini-series *John Adams* (Hooper 2008) (Foster 2010, p. 105, 108):

Figure 1: Green screen as backdrop as seen in John Adams (Hooper 2008).

In addition, green screen technology can construct the entire virtual set, where the actor can be filmed within a complete green room and then composited into a completely new designed environment, as seen below in *Ugly Betty* (2006-2010).

Figure 2: Green screen and the virtual set. America Ferrera in Ugly Betty (2006-2010). ("Still by author" taken from Stargate Studios Virtual Backlot Reel 2009)

Consider how complete 'virtual worlds' were generated in the film *Avatar* (Cameron 2009) (*Avatar: the filmmaking future is now* 2010, p. 2).

Another use of green screen is to cover part of the body with 'green', where the green area can then be erased and replaced digitally. In the film *Planet Terror* (Rodriguez 2007), the character Cherry Darling has a semi-automatic leg extension. *Scenic faith* is critical to achieve congruency between the physical leg and the imaginary weight, feel, walk impediment and body influence of a semi-automatic.

Figure 3: Body Replacement. Rose McGowen in Planet Terror (Rodriguez 2007). ("Still by author" taken from The 10 Minute Film School: Planet Terror [sa]).

In the film *Alice in Wonderland* (Burton 2010), green screen was used to create an entire outfit for Stayne, the Knave of Hearts (Alice in Wonderland – Behind the scenes [Part2] [sa]).

Figure 4: Green screen wardrobe. Crispin Glover, Johnny Depp and unknown actor in Alice in Wonderland (Burton 2010). ("Still by author" taken from Alice in Wonderland – Behind the scenes [Part2] [sa]).

The actor's actions had to integrate with the character's wardrobe digitally placed on him during postproduction. Similarly, green screen can even insert whole virtual characters, as can be seen above, where an actor is entirely enveloped in green to be substituted later by a CG character.

In the preceding examples, the actor faces the challenge of reacting and responding 'as if' his character was in the proposed circumstances that are finalised in postproduction. While an actor may be assisted by a pre-visualisation or moving storyboard as in *Land of the Lost* (Silberling 2009) (*Science of the Movies* 2009), for the actor to fully share in the filmmaker's reality - to 'believe' in the constructed diegetic world and function within it - the actor needs imagination. Given the emphasis on the actor's belief in his environment through the use of imagination, an acting approach that stimulates and centres around the imagination is crucial. Stanislavsky's *magic if* is such an approach.

The actor: searching for a strategy

Stanislavsky's system consists of exercises and techniques developed to aid the actor in credibly portraying a character in the diegetic world by achieving *scenic faith*. Through conscious techniques the actor can stimulate the subconscious (Stanislavski 2010, pp. 17-18). Although this study focuses on the *magic if*, its implementation requires an understanding of other ideas and processes Stanislavsky promoted:

- *Experiencing* is achieved when the actor believes in the diegetic world and is 'living' in the now, within the moment of the scene (Carnicke 2009, pp. 129-130, 218; Stanislavski 2010, pp. 70, 154), and as the character, is absorbed within the environment (Spolin 1970, p. 642).
- *Psychotechnique* describes the synchronisation and communication of body/mind (Merlin 2007, p. 21; 2010a, p. 14; 2010b, pp. 4, 27) and its interrelatedness (Carnicke 2009, p. 222). The psychophysicality of the actor consists of three 'inner motive forces' or 'inner psychological drives': mind, emotion and will (Stanislavsky 1973, p. 247; Stanislavski 2010, p. 276; Merlin 2007, p. 162; 2010b, p. 15). Stanislavski (2010, p. 280) posits that the activation of one of these elements would activate the others. This concurs with Merlin's (2010b, p. 15) view that an engaged imagination geared towards the action will generate emotions authentic to the proposed circumstances. Within the green screen environment this is crucial.

The *magic if*

This study positions the *magic if* is a possible solution to the green screen challenge as it encourages the actor's imagination. The *magic if* assists the actor to 'believe' in the diegetic world, to entice creativity, and to generate feelings that are recognised as authentic within the character's proposed circumstances (Stanislavsky 1973, p. 50; Stanislavski 2010, p. 52). The *magic if* operates in conjunction with the given circumstances (Stanislavsky 1973, p. 51; Stanislavski 2010, p. 52). The given circumstances is shaped by the knowledge that can be deduced from the text (Gordon 2006, p. 51; Carnicke 2009, p. 218), including the history, social environment and any detail that might influence the character's actions (Carnicke 2009, p. 218). The production, directorial ideas and the presentation medium must also be considered (Carnicke 2009, p. 218; Merlin 2010a, p. 101). By acknowledging all these circumstances which are congruent to the design of the diegetic world (crucial to green screen), the actor has a foundation on which he can build his imaginative surroundings and create the character. The imaginative construction and created character leads the actor within the green screen space to answer the question "What if these circumstances were true?".

The implementation of the *magic if* requires the actor to accept the imaginary diegetic world, but it also spurs the actor toward action. As Stanislavski (2010, p. 67) put it, "What would I do if my fiction became fact?". Importantly, it is through action that imagination is communicated (Stanislavski 2010, p. 84). This question has been rephrased by many acting teachers as "what would I do if I were the character in the situation?" (Kemp 2012, p. 109). This reformulation is crucial as it encourages the actor to incorporate the character's personality (Kemp 2012, p. 109), an important step for the actor's actions to be congruent within the diegetic world and the visual effects.

The *magic if* thus permits the actor to infuse the virtual reality (a designed environment with given circumstances) with the lived green screen reality, which in turn connects the reality of the actor with the reality of the character. The actor uses the following components to build and sustain the diegetic world: imagination, sense memory, concentration, observation, communion, action and relaxation. All these components will be discussed later in the article.

A Neuroscientific foundation

As acting exhibits human behaviour, acting strategies need to be revisited from a neuroscience perspective (Blair 2008, p. 23). Each human organism, and therefore actor, has essentially the same brain structures and functions, which only differs in information and environmental reaction due to each individual's knowledge and experience (Lutterbie 2011, p. 12). Through brain imaging techniques neuroscientists obtained pictures of mental processes and cognition (Blair 2008, p. 11; Nataraja 2008, p. 72). The information gathered by these images is valuable to the actor and his own acting processes as it provides insight into brain processes (Blair 2008, p. 3).

Nataraja (2008, p. 156) posits that control over unconscious behaviour is possible through conscious understanding. This point suggests a parallel with Stanislavsky's view of accessing the subconscious through conscious strategies. Although the brain is divided into different areas it has to be considered that the brain operates in coordination and multimodality (Lutterbie 2011, p. 81). An important system that demonstrates this coordination and multimodality is the limbic system (Angevine 2002, p. 324), which includes the hypothalamus, hippocampus and amygdala and is responsible for emotion, behaviour and memory (Nataraja 2008, p. 61; Lutterbie 2011, p. 82). The functioning of the limbic system can be associated with Stanislavsky's 'inner psychological drives'. The limbic system, based on experience and existing need, reacts and interacts with the immediate surroundings and circumstances (Ward 2006, p. 28) in a way that promotes the involvement of the actor's own experiences in traversing green screen environments.

From a connectionist perspective (Kemp 2012, p. 94), the brain can communicate and activate multiple regions for a mental function due to the neural pathways that connects across the all-inclusive brain (Carson, 2010, pp. 45-46). This coordinated processing is denoted as parallel processing (Ward 2006, p.8; Nataraja 2008, p.53). Neural pathways are constructed from neurons, the essential component of any nervous system, which receive, process and communicate information quickly and accurately between each other (Kandel 2006, p. 443; Nataraja 2008, p. 48). Together these neurons form networks or "maps" which represent the self and the world (Damasio 2010, p. 18). To successfully navigate and operate within the environment these maps are activated (Blair 2008, p. 20).

Neurons and maps can be strengthened and altered. Neuroplasticity is the ability of the neural pathways to modify according to experience and environment (Nataraja 2008, p. 49; Kogan 2010, p. 86). The created maps are in a continuous shifting state (Damasio 2010, p. 66). The actor can take advantage of neuroplasticity to enhance and strengthen the brain maps concerned with the implementation of the *magic if* and its components. This can be done through exercising and repetition. The more a neural connection is activated the more it is embedded and strengthened (Nataraja 2008, p. 62; Kemp 2010, p. 95), resulting, if utilised correctly and with the required discipline, in a performance that is congruent with the diegetic world.

Neuroscience and the *magic if*

Within cognitive neuroscience the "as-if" body states, constructed from somatic experiences, are closely related to Stanislavsky's *magic if* (Blair 2008, p. 79) and substantiate the *magic if's* implementation by the actor. The "as-if" body states permit the brain to create and experience a body state not congruent with the present reality (Damasio 2003, p. 116). This allows the actor to create and experience the body state of the imaginary character within the imaginary circumstances "as-if" it were real. Experiencing these fictitious body states is possible due to the perception of body states being imbedded in the maps of "somatosensing regions", simultaneously aiding action by engaging the somatomotor regions (Damasio 2010, pp. 102-103).

The use of the *magic if* is also supported by Carson's *envision brainset*, which are the neural maps responsible for the imagination (Carson 2010, pp. 16-17). The *envision brainset* works with mental imagery and hypothetical events recovered and instructed through related brain processes to those that process real events (Carson 2010, pp. 104, 107). Hypothetical thinking explicitly relates to the *magic if*; as Carson (2010, p. 110) states, this is a person's ability to think in "What if?".

Having established the neuroscientific background for the use of the *magic if* in an acting context, the study now turns to the various components of the *magic if* the actor needs to be aware of or even engage with.

a) Imagination and sense memory

Imagination consists of mental images forged from memories and environmental information (Kemp 2012, p. 110), it has the ability to arouse feelings associated with these images (Stanislavski 2010, p. 74), and the ability to consider "fictional circumstances" as reality (Carnicke 2009, p. 219). Sense memory is the recalling of sound, touch, sight, smell and taste (Easty 1992, p. 24). A memory is the reactivation of an existing neural pattern (Blair 2008, p. 20). It is stored within several brain areas, with each area storing different information of the memory. The existing pattern connects the areas when the memory is recalled (Carson 2010, p. 42). Actors implement their imaginary senses when utilising imagination (Stanislavsky 1987, pp. 20-21). Visual stimuli and imaginary recall activate similar neurons; this activation within the various regions, including the hippocampus and amygdala, is dependent on the object being imagined (Kreiman, Koch and Fried 2000, pp. 357-358). Thus imagination stimulates both memory (hippocampus) and feeling (amygdala). This is true for the other senses as any imaginary input activates similar areas to the actual sensory input and influences a person's actions (Carson 2010, p. 108).

Vivid mental pictures and sensory recall activate similar neural maps as actual sensory stimuli and therefore appropriately influence his actions within the scene. With green screen the detailed imagined condition will aid the actor in experiencing the proposed circumstances. This experiencing and simultaneous existence is crucial to green screen acting. A theory pertinent to this co-existence of the physical and imaginative space is Fauconnier and Turner's conceptual blending. This is a mental creation where two perceptions are compared and blended into a new perception (Lutterbie 2011, p. 174; Kemp 2012, p. 119). Fauconnier and Turner applied this theory to the audience view of the actor/character and reality/fiction relationship. Kemp (2010, p. 104-105) theorised that it can be applied to the actor's perspective of the actor/character relationship. This study suggests that it can be applied to the actor's perspective of the reality/fiction or green screen/fantasy relationship as well. Conceptual blending incorporates the body's location, experience and configuration of the space (Lutterbie 2011, p. 174). Lobdell (2000, pp. 185-186) suggests the "Place" exercise which urges the actor to experience the moment of a specific place within the imagination through sensory detail, first with the eyes closed and then open so that the physical and imaginative worlds co-exist.

Stanislavski (2010, p. 72) argued that the most effective way for the actor to engage his imagination is by being an active participant within the imagination from a first person perspective, as this will elicit appropriate inner responses. Jackson, Brunet, Meltzoff and Decety (2005, p. 758) founded that imagination of oneself as a first person active participant stimulates neural networks more comprehensively than imagining another person in action. This substantiates Stanislavsky's view of being an active participant or active imagination, in order to activate additional relevant neural patterns. The activation and preservation of imagination and sense memory requires concentration.

b) Concentration and observation

Concentration facilitates imagination (Stanislavsky 1967, p. 429), assists in controlling the images (Chekhov, 1991:9), and preserves the actor within the diegetic world among all the possible distractions (including green screen) of the 'outside' world (Gordon 2006, p. 46). Neuroscientifically, attention refers to the ability to prioritise what needs to be dealt with (Blair 2008, p. 61). This ability allows for the attention to connect to the essentials of the moment and immediate environment.

The control of attention is based on top-down (behavioural) and bottom-up (sensory input) sources (Vecera & Luck 2002, p. 270). The actor will utilise behavioural control as the green screen environment produces limited sensory input. Behavioural or top-down control is associated with the frontal brain area (Vecera & Luck 2002, pp. 271-272). Another attribute is that attention stabilises the spatial map (Kandel 2006, p. 312) which is critical in navigating the green screen space. Attention towards an event calls for observation. The actor creates from the given circumstances, imagination and his observations (McGaw, Stilson & Clark 2012, p. 98). Through observation and experience the actor can stimulate the imagination (O'Brien 1983, p. 132), and create characters congruent to the diegetic world (McGaw et al. 2012, p. 98).

The concept of neural reentry reveals the significance of observation. Edelman (in Kaag 2009, p. 196; Lutterbie 2011, p. 110) describes this process as the activation of neural maps of past experiences pertinent to the current lived situation; simultaneously developing new neural maps (influenced by the preceding maps), as a new experience. Past neural maps influence the current reactions of the person, while creating a new experience that will influence future behaviour congruent to the upcoming situation. Observation thus becomes crucial in building a neural repertoire for the actor relevant to various situations.

c) Communion

McGraw et al (2012, pp. 126-128) posits that the actor has to remember that there are always feelings and thoughts, or relations, to the environment. These relations reveal the stimulus behind actions. There is an endless exchange of actions (inner and outer) or *communion* (Stanislavsky 1973, pp. 194, 197) with the environment. Cognitive neuroscience agrees that when the organism involves an object there is a relation between the two (Simpkins & Simpkins 2010, p. 44). Relation is crucial as indicated by Chaikin, where he uses the image of a burning house to define the actor's relation to it – is he the owner, neighbour, witness, or journalist (Hulton 2010, p. 168)? Each relation will elicit another reaction. It is through communion using the imagination that feelings are aroused (Merlin 2010b, p. 185). This is substantiated by neural patterns firing and eliciting emotional responses when a real or remembered occurrence or object is detected by the brain (Damasio 2003, p. 53).

d) Action

Within film and television the actor's actions are crucial (Baron & Carnicke 2008, p. 1). Discovering the character's actions within the designed diegetic world and executing them successfully will promote congruency; but will also elicit appropriate feelings (McGaw et al. 2012, p. 28). This calls for congruency between the director's vision of, and the actor's interpretation of the designed world. When working within a virtual world a visual effects supervisor would generally be on set to ensure the actor's actions are congruent to the virtual world that will be added in post-production (*Science of the Movies* 2009). Action is crucial to psychophysicality for David Zinder (in Zarrilli 2009, p. 20), who states that the physical can stimulate the imagination. Shared maps between physical movement and that of imagery or abstract thought, permits the body to kindle imagination (Kemp 2010, p. 109; 2012, pp. 99, 110-111).

The actor's relation to space is important as he will function within the physical green screen space and the virtual world space. Imagined space and physical space are represented or constructed differently within the brain (Ward 2006, p. 143), yet the hippocampus houses neurons or "place cells" which generate a spatial map of the environment and assists in navigating through the said environment (Simpkins and Simpkins 2010, p. 146). These neurons are also activated during the imagining of an environment (Ward 2006, p. 148). This insinuates that the actor can use these "place cells" to generate and learn (hippocampus is responsible for memory) the spatial map of the physical environment, as well as the imagined environment.

e) Relaxation

Relaxation expels tension within the body which can inhibit the creative progression necessary for acting (Stanislavski 2010, p. 120; Krasner 2012, p. 24). Relaxation is integral to promoting psychophysicality through the communicative "inner motive forces" (Merlin 2007, p. 32). Nataraja (2008, p. 31) and Lutterbie (2011, p. 22) agree on the influential and universal nature of the body and mind. When psychophysically relaxed, the actor can naturally adjust to the given circumstances of the diegetic world (Merlin 2007, p. 69), which is crucial to congruency. Tension impedes incoming sensations (Lobdell 2000, p. 181); when these sensations are imaginary (green screen), tension can significantly inhibit such sensations and prevent congruency.

A practice that is geared toward the holistic function and expression of the human organism, incorporating all the components discussed to access the *magic if,* is guided imagery. This strategy creates images which influence the body emotionally and physically (Hart 2008, p. 295) and involves the senses and emotions (Naparstek 2000, para. 2). Mental imagery can assist in experiencing sensory stimuli not present in the physical environment (Carson 2010, p. 108). This is substantiated by the discussions above on the *magic if*, imagination and sense memory. When applying guided imagery the following must be adhered to: internal quieting (relaxation), external quieting (concentration), intention, and relation with sensations and emotions (Epstein 1989, pp. 14-16, 23).

Explorations

The explorations designed within this study are based on the interrelatedness of green screen, the *magic if* and neuroscience; these explorations assist in the development of the skills actors require (supported by neural plasticity) to implement the *magic if* when entering the green screen environment. The successive explorations build the actor's capacity:

Figure 5: Schematic representation of explorations building toward strategy.

Below is one of the designed explorations incorporating relaxation, concentration, observation, imagination and sense memory. This exploration should result in greater congruency between actor and virtual environment.

Imagination and given circumstances exploration: familiar stories

- Close your eyes and take a few deep relaxing breaths.
- Decide on a specific familiar story, for example Romeo and Juliet.
- Decide on a specific scene in the story, for example the balcony scene.
- Place yourself actively (first person point of view) in the proposed environment from the perspective of one of the characters, for example Romeo.
- Vividly imagine all the sensory stimuli: What do you see from your chosen perspective? What do you hear? What do you smell? What do you physically feel in the environment from this perspective?
- As you vividly imagine all the sensory input, take your time and exist in this imaginary environment. The imagined environment must be vibrant and have movement, for example animals running around or Juliet coming out onto the balcony, because static imagery and moving imagery engage different neural maps.
- Now change your perspective to another character, for example Juliet.
- Vividly imagine all the sensory detail from her perspective.
- As you vividly imagine all the sensory input, take your time and just be in this imaginary environment. The imagined environment must be vibrant.
- When ready, take a few deep relaxing breaths and open your eyes.

Executing this exploration daily prepares the actor to accept various circumstances while constructing the diegetic world within his imagination. The actor needs to visualise and act according to the specifications of the director's or visual supervisor's ideas, resulting in congruency with the designed world added in postproduction. This exploration engages and strengthens the relevant imaginary neural patterns, which re-creates experiences congruent to the imagined environment and facilitates the manipulation of the imagination. Such manipulation in turn activates different neural maps (Carson 2010, p. 109).

Conclusion

This research project identified the challenges green screen poses to the actor and how the *magic if* can be implemented to circumvent these challenges. Drawing from cognitive neuroscience the *magic if* was substantiated and a strategy and explorations were developed to access the *magic if* when entering the green screen environment. The following were considered:

- Green screen: Implemented by the filmmaker to incorporate an alternate reality when constructing the diegetic world. By limiting the external stimuli the actor has to imagine, feel and act according to the designed reality that will be added in postproduction.
- *Magic if*: An acting strategy that stimulates the imagination in constructing the desired diegetic world for himself. This will lead to action, feeling and congruency with the designed world.
- Cognitive Neuroscience: Studies of the human brain and behaviour has substantiated the implementation of, and provided insight into the accessing of the *magic if*.
- Explorations and strategy: The knowledge gained through neuroscience assisted in the development of skill explorations and a strategy to implementing the *magic if* when working with green screen technology.

Filmmakers can, through digital design and compositing, create extraordinary environments, props, wardrobes, and digital characters, yet the actor adds to creating a sense of authenticity in the scene. Altogether, the utilisation of the above (imaginative and neuroscientific) processes and techniques should allow for a reciprocal congruent relationship between the designed virtual environment and the actor.

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DETERMINING SELECTION CRITERIA FOR THE COMPILATION OF AN INTERIOR DESIGN CORPUS

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Abstract

The paper considers culture as a collection of meanings which are produced and consumed by a given social group. Thus, the generation of meaning would be analogous to the generation of culture.

In the investigation of architectural (built) artefacts it is unusual to identify a representative sample; instead research focus is on the in-depth precedent study. The purpose of this paper is to identify selection criteria for such a broad corpus of interior design artefacts (which may be studied from a semiotic perspective) as grounded theory requires a large and broad data sample. This is a novel application.

This paper will consider the role of the interior design researcher as domain gate-keeper in the determination of criteria to select a future corpus of interior design artefacts for semiotic analysis. It will conduct a literature review of interior design and social theory to identify selection criteria. The analytic purpose and selection criteria serve as example from which broader principles are identified.
Keywords: *corpus; cultural production; interior design; selection criteria*

Introduction

The position is taken that the conference theme 'design cultures: encultured design' reflects the reciprocality between design activity and culture in the broadest sense. Social space is the vehicle in which the cultural life of society takes place. Social space is produced by and influences cultural interaction. Space facilitates behaviours and interactions and gives form to social structures and ideologies (Perolini, 2011 pp.167-168). This is an account of the recursive relationship in which cultural practices inform place-making while place-making in turn construct and maintain cultural practices. This is essentially a process of creating, transmitting and interpreting meaning. If a narrower view is taken and culture is defined as a community which shares values, practices, processes and products then such a culture may be the community of a professional discipline. The paper is broadly aligned to the design community with specific reference to the production and maintenance of culture by an identifiable group. It is built from interior design research, but is presented from the assumption that there are shared practices and values between design communities and that knowledge may be shared amongst them. The paper introduces the concept of cultural production and considers the domain gatekeepers as important role-players.

A 'corpus' is considered as a collection of artefacts (texts, writings, material artefacts, etc.) assembled for the purpose of analytical interpretation, this is differentiated from a 'text corpus' which is a large structured collection of texts used in linguistic analysis where the method is largely statistical (e.g. the *International Corpus of English*[10] or the *Corpus of Contemporary American English*[11]). A 'body' simply refers to a collection, without any specific analytical purpose. The 'canon' is a cumulative cultural repository (Attiwill, 2007 p.59).

[10] http://ice-corpora.net
[11] http://www.americancorpus.org

Journals, exhibitions and teaching disseminate the canon and the canon is formed through selection, recognition and publication (Attiwill, 2007 p.59). In my interpretation the canon is the largest collection of artefacts considered as valuable, a body is merely
a collection while a corpus is a collection with analytic purpose.

In the investigation of built artefacts research focus is on the precedent study while representative samples are unusual (Bechtel, 1980 p.218). If a representative sample is considered the problem is to determine selection criteria for such a collection. This paper refers to a representative corpus of interior design artefacts as example (this corpus will be used as a data set for content analysis through interpretation). The purpose and selection of this corpus serves as one example from which broader principles can be inferred. This corpus forms part of a larger research project and is aimed at the determination of methods to create meaning in interior artefacts. Interior spaces can be considered as examples of artefacts that exist as expressions of the recursive relationship between place-making and cultural practices in general. Interior spaces provide the tangible places in which intangible cultural practices can take place. These places form part of the social world in which humankind exists. This is the world of thinking and living in society. It is in this social world that individuals, under the guidance of symbols, "perceive, feel, reason, judge, and act" (Geertz, 2000 p.405). Since place-making and culture are both considered as processes of creating, transmitting, and interpreting meaning this paper will present a brief overview of meaning and interpretation.
The thesis of this paper is that when design corpora are compiled the selection is dependent on the taste of the collector; but this should be augmented with the use of selection criteria which are compiled through research.

The paper is delivered from the point of view that it is not feasible to establish a definitive corpus which includes all worthy artefacts (this approach is applicable to other disciplines and applications). The selection criteria are determined through literature review. The method is informed by Barthes' (1983) study of the fashion system. He argues that it is not necessary to study the entire corpus diachronically. If the determination is systemic analysis it will be more efficient to limit the corpus synchronically (Barthes, 1983 p.10). The review is conducted as constructivist grounded theory (CGT) (described by Charmaz, 2006). When we are engaged with data we *construct* understanding based on our subjectivity (Charmaz, 2006 p.47). The purpose is to offer an interpretive portrayal of the world (Charmaz, 2006 p.10). CGT is underpinned by a relativist position which states that the researcher constructs theory as an outcome of their interpretation of the data (Mills, Bonner & Francis, 2006 p.7). Interior design and social literature is collected and coded segments of data are categorised to isolate selection criteria (this is facilitated with the computer assisted qualitative data analysis software (CAQDAS)).
The set of selection criteria that are determined through this process serves as an example from which broader principles are uncovered. These principles represent the findings of the paper since they have applicability in the establishment of other corpora.

Meaning and interpretation

When a corpus is assembled the analytic purpose and theoretical background is instrumental in determining selection criteria. For the example under discussion the idea of meaning and its interpretation as agent of culture is important. It is necessary to define culture broadly at this point: "Culture in all its early uses was a noun of process," (Williams, 1976 p.77). 'Culture' can be considered as the entity encompassing all human phenomena not determined by biology. In this way 'culture' includes all human endeavors: objects and artefacts, architecture, technology, knowledge, professions, institutions, religions, music, literature, etc. Lewis (2008 p.396) describes culture as "an assemblage of meanings which are generated and consumed by a given social group." This is supported by Geertz (2000 p.5) who states that culture is essentially the webs of meaning

that humankind created. Isar and Anheier (2004 p.4) summarize Csikszentmihalyi's systems perspective of cultural production as such:

> *[T]he interactions between, first, the creative person, second, the domain (a specific cultural symbol system) and third, the field (defined as made up of domain gate-keepers such as art critics, gallery owners, star performers, etc.) are what determine the emergence and in particular the* recognition *of a creative act or product. The creative individual takes information in a domain and transforms or extends it; the field validates and selects new ideas and methods; the domain then in turn preserves and transmits creative products to other individuals, societies and generations.*

In other words, cultural production is a circular system of selection, interpretation and synthesis of meaningful elements or actions (cultural information). Cultural production is an iterative, collaborative project which is dependent on individual expressions. These expressions must be recognized as 'valid' or 'valuable' and made available to the canon and disseminated. It is at the point of recognition that the 'domain gatekeepers' become noteworthy.

Domain gatekeepers act as mediators in the cultural production process. Millard (2001 p.13) describes the art establishment as something that was dull and unconcerned with popular acceptance just as the populace was unconcerned with it. This changed when young British artists became "concerned with ease of comprehension rather than perplexing intelligence" (Millard, 2001 p.25). Sometimes meaning must be communicated explicitly and be easy to understand; this is because cultural production is not only dependent on cultural 'pinnacles', but on the everyday (Millard, 2001 p.135). It implies that cultural production takes place in a hierarchical fashion and it is the role of the cultural intermediary or the domain gatekeeper to act as mediator in the process and to provide 'validity' to artefacts. Cultural capital may move 'up' or 'down' in the hierarchy (Bourdieu, 1984 p.327). This is supported by Douglas when she describes culture as a system of differentiation and emulation: "happiness goes up as design travels down the social scale, then the upper class begins to be unhappy because its designs are no longer distinctive. It adopts a change, to outpace low-class emulators, and the emulators' happiness goes down, until they gradually catch up again," (Douglas, 1996 p.56). Phillips (2005 p.217) sums up the role of the 'tastemaker' as an undemocratic but significant conduit for the formation of taste. Domain gatekeepers carry designations such as *virtuoso, connoisseur*, 'expert', (and 'designer'?) to indicate a lifestyle freed from basic and material needs to which 'vulgar' people are sacrificed (Bourdieu, 1996 p.293). The lifestyle is geared toward aesthetic appreciation and expressions of 'good-taste'. Bourdieu (1996 p.294) continues that this is geared, along with philosophical investigations into the knowledge of objects, towards the social construction of the artefact. Taste is considered as an inescapable social aspiration (Millard, 2001 p.246). Although it is clear from the accounts above that domain gatekeepers carry hegemonic agency, they provide a valuable role as cultural producers in their mediation between producers and consumers of cultural capital. It is through their selection, recognition and dissemination of the new that validity is provided. They are influential in determining popular taste and utilize fascinated media to disseminate ideas and to influence culture in general (Millard, 2001 p.27). Isar and Anheier's (2010 p.4) account of mediation in the cultural domain indicates that all novel ideas and artefacts are not considered as valuable. Bourdieu (1984 p.16) identifies a hierarchy of taste: legitimate taste; middle-brow taste; and popular taste. Once novel ideas or artefacts are validated by the gatekeepers they are made available for further synthesis. As informed individuals the domain gatekeepers determines which novel artefacts are considered as worthy of study and emulation. They include prominent designers, educators and researchers. The mediation is constant, especially in the form of design education: educators will firstly expose students to artefacts while providing value judgments; secondly, when novel artefacts are produced by students (a common occurrence) a large proportion will be rejected through continuous assessment (these pedagogic actions need further research which fall outside the scope of the paper).

The analysis of culture is an interpretive process in search of meaning (Geertz, 2000 p.5). Culture can thus be studied as a system of meaning, and the generation of meaning considered as analogous to the generation of culture. If interior spaces are considered as expressions of the recursive relationship between place-making and cultural practices in general then it must be inferred that they are carriers of cultural meaning. Their meaningful content can then be analyzed specifically to determine *how* meaning is created in these artefacts. Content analysis is the examination of data with the aim to systematically describe form and content. Since qualitative data may often be ambiguous, a systematic approach is advised for rich text and deep accounts (Martin & Hanington, 2012 p.40). The methodological problems encountered to order the 'cultural cosmos' is analogous to the steps used to organize the natural world. The first step is the observation of phenomena (collecting empirical material); secondly these must be interpreted; finally the results must be coordinated in a coherent system or theory (Panofsky, 1955 p.7). To infer such a coherent system of theory from a limited number of precedent studies will have severe shortcomings.

When built artefacts are selected for analysis (or to serve as examples during instruction) there is a tradition to focus on the in-depth case study or the 'precedent study' (Bechtel, 1980 p.218). The case study involves the in-depth investigation of singular examples using multiple source of evidence. The in-depth investigation of notable cases aims to compensate for the lack of breadth but it limits the ability to generalize (Martin & Hanington, 2012 p.28). When the design researcher or educator exercises their role as domain gatekeeper in the choice of notable artefacts this is a highly effective and appropriate method. Precedents provide useful examples for understanding architectural form but their study omit many important interior design characteristics such as furnishings, materials and room concepts (Jennings, 2007 p.49). I assume that when a domain gatekeeper selects an artefact it will be a canonic artefact which can be considered as extraordinary (for interior design Carlo Scarpa's Olivetti Showroom in Venice (1957-1958) may serve as an example of such an artefact). The selection of a case study is not aimed at representivity (Martin & Hanington, 2012 p.28). Abimbola (2001 p. 48) asserts that focused precedent studies may be biased towards works from the western canon and may lead to the lack of inclusion of cultural diversity in design education.

I do not question the validity of the case study approach and merely argue that it can be augmented in design research. There exists a need for the study of many cultures and a broader empirical investigation of the designed artefact (Abimbola, 2001 p.57). The in-depth case study is not applicable for all forms of research and is specifically limited for use in grounded theory. Grounded theory requires larger, broader samples, since a small sample will seldom match the insight that emerges from a detailed case study (Charmaz, 2006 p.95). It must also be considered that the selection procedures of domain gatekeepers are highly subjective and the shortcomings of their subjectivity may not be revealed to design researchers when they select canonic artefacts. When many cases are studied, or broader representivity is acquired, researchers may become aware of their own preconceptions about their topics (Charmaz, 2006 p.132). In the grounded theory context a "researcher can rarely make persuasive, much less definitive, statements from limited data," (Charmaz, 2006 p.18).

Most grounded theories are substantive theories since they investigate clearly delimited problems in substantive areas. The logic of grounded theory can reach across these substantive areas into the realm of formal theory; this is reliant on generating abstract concepts and to develop the relationships between them (Charmaz, 2006 p.8). The case study approach is too specific to allow the development of abstract concepts that can be used to understand problems in multiple substantive areas. (As an example it is useful to consider the grounded theorist Erving Goffman, his concept 'dramaturgical analysis' can be applied in interior design to consider the connection between everyday life and theatrical performance (Edwards, 2011 p.127).

The compilation of the interior design corpus which serves as example for this paper is aimed at determining a data set for content analysis. The research purpose is to generate knowledge in the form of theoretical

interpretation of artefacts (in other words, research about design). The theoretical interpretation will consider the ways in which interior design artefacts generate meaning, and by implication how this contributes to cultural production in the broader sense.

Selection criteria

When a broad sample of artefacts is assembled for analytic interpretation (i.e. when a corpus is determined) it is not feasible to solely rely on the subjective selection which the researcher will exercise when acting as domain gatekeeper. It now becomes important to determine a set of selection criteria which augments the taste of the design researcher in the selection of artefacts for inclusion.

In the absence of actual material artefacts the use of representative documents (e.g. photographs) has methodological and practical advantage. These include the ubiquity of these documents, their ease of acquisition and the ability to store them. (To collect a corpus of actual interior artefacts is clearly not feasible.) The 'texts' included in the corpus will be visual representations of the actual artefacts. The photograph of the interior is then considered as the primary empirical evidence. It was established earlier that the determination of the corpus is dependent on the arbitration of gatekeepers. As it is not prudent to solely depend on taste and the availability of convenient data to compile a corpus a set of criteria is proposed. The set is specifically aimed to generate a broad, representative sample of interior design artefacts for content analysis. Since all artefacts cannot be considered the selection criteria will narrow the applicability and imply limitations to the findings. The selection criteria are presented synoptically:

Inclusion criteria

Artefacts must comply with all inclusion criteria to be included in the corpus.

1. Interior design

The artefacts must be identifiable as interior design. The 'core' of interior design is considered broadly and includes everything from 'selection of cushions' and 'coordination of adjacent rooms' (Taylor & Preston, 2006 p.12) to projects created *ex novo* (Sparke, 2012 p.24).

2. Commercial interiors

In the largest American interior design practices a marginal percentage of fees are generated by residential interior design (Zimmerman, 2013 p.99). Interior design's influence on cultural production is publically oriented and the discipline's professional underpinning is oriented toward the commercial interior.

3. Public access

Since public realm is important in defining the self (Csikszentmihalyi & Rochberg-Halton, 1989 p.17) the chosen interiors must be accessible by the public and specifically excludes access controlled areas (e.g. hotel bedrooms; private areas of corporate head offices).

4. Physical context

The interiors should be physically enclosed with a strong boundary condition.

5. Synchrony

The synchrony is limited to the period after the singing of the *IFI Interiors Declaration* (February 2011).

6. Contemporary

There is a need for design research to focus on contemporary design (Jennings, 2007 p.52). Artefacts are considered as contemporary if they are paradigmatically appropriate.

7. New

The artefacts must be 'new': a dialectic discomfort between tradition and innovation must be present (Deleuze, 1992 p.163).

8. Contrived or fictional

The interior must be 'contrived' and should not be the result of the everyday or vernacular; an author must be identifiable.

9. Broad reading

A broad reading of meaning must be possible; this is included in an attempt to accept the coexistence of multiple tastes (Sparke, 2012 p.27).

10. Iconic of built

The data will be in the form of iconic (pictorial) representations of built artefacts. The iconic representation forms part of the architectural canon, and is available to study built artefacts in the absence of the actual artefact (Rattenbury, 2002; Rice, 2007; Attiwill, 2007). The purpose is to compile a corpus of images.

11. Cultural context

The cultural context can be described as neo-liberal and post-industrial. It is assumed that the consumption and production processes of a western cultural milieu are in place (Cook, 2005). The post-industrial milieu reflects a plurality of cultural perspectives (Myerson, 2004 p.191).

12. Small scale production

Interior design artefacts are considered as mediators of large scale production, but the artefacts themselves are small scale (Hesmondhalgh, 2006 p.215).

13. Media

Barthes (1983 p.10) identifies fashion magazines as suitable corpus to study the fashion system. Interior design magazines may be included, but the focus will be on electronic publication due to convenience, availability and speed of dissemination.

14. Audience: experts or laypersons

Iconic structures aimed at both laypersons and experts will be included, these have different conventions (Serraino, 2002 pp.127-8) and will convey meaning in different ways.

15. Reader: semantic or critical

The artefact must lend itself to semantic and critical evaluation (Eco, 1990). Some artefacts will foresee both types of readers; at least some of the artefacts must have been created with this in mind.

Alignment criteria

Alignment criteria are included to align the corpus with the researcher's subjective interests. The purpose of these criteria is to allow for the researcher's emphatic response. Unlike the inclusion criteria they are not exclusionary or controlling. They also allow the researcher to act as domain gatekeeper and not simply be reliant on a set of controlling criteria.

16. Mode of production: install, insert, intervene or new

Although all three modes of production of interior design (as identified by Hay, 2007) and new buildings are included the selection will lean to the 'insertion' with its characteristic strong boundary.

17. Geography: dominant centre, Alpha city or the global South

Dominant design centres identified by Sunley (2008 p.676); the Globalization and World Cities Research Network's assessment of globally integrated cities, 'Alpha++' and 'Alpha+' (GaWC, 2010); and The South, Asia, and other Postcolonial contexts are included to broaden the interior design canon (beyond the Western paradigm). If either the project or the design firm is located in a location of geographic alignment, it will be indicated.

18. New, young firms

An alignment towards 'new young firms' is included since their work may shift the canon (Rattenbury, 2002 p.206). Firms will be indicated as new or young if the principles are younger than 40 or the design practice newer than 10 years.

19. Value judgement

The domain gatekeeper is allowed to offer a value-judgement on that which is 'valuable, interesting, and essential' (Rattenbury, 2002 p.58).

20. Utility

Artefacts which do not comply with the other criteria, but which is deemed useful to the study, may be included in the corpus, at the researcher's discretion, if they illustrate pertinent issues.

Consideration criteria

These criteria consider the artefact and its contribution to cultural production.

21. Taste

The artefact which includes taste, furnishing, decoration and the surface to encompass 'interior design' and thus avoid "[retreating] into 'interior architecture'" (Kleinman, 2012 p.29) is identified.

22. Gender

It is assumed that all interior artefacts are gendered (Taylor & Preston, 2006). Artefacts will be identified that comment or gives input on sexual identity or gender specifically.

23. Privacy or interiority

Artefacts are identified which deals with privacy or interiority. Issues of identity and the privacy – publicity dialectic involves issues of interiority and habitation (Sparke, 2009 p.3).

24. Non-canonical

Artefacts which contribute to a 'new' and fragmented canon (Jacobs & Hanrahan, 2005 p.8) and which questions the boundary of the discipline are identified.

Conclusion

The paper presented the selection of broader, representative samples of designed artefacts as alternative to the case study or precedent study. Such a collection of artefacts should be considered as a 'corpus' which is a collection of artefacts with analytic purpose. When a design corpus is assembled the selection is dependent on the taste of the researcher who acts as domain gatekeeper. Since corpora are intentional, their compilation can be augmented with the use of selection criteria determined during the research process itself. As illustration the paper presented an example: the section criteria to determine an interior design corpus for content analysis through interpretation. This analysis is aimed at identifying interior design's methods to generate meaning. Since the example may be considered idiosyncratic the findings and recommendations are generalized for broader application:

Findings

The domain gatekeepers play a role in the generation and maintenance of culture. They specifically play a role in the mediation of the novel artefact which they may reject or accept and make available as cultural capital for future iterations.

Since the taste of domain gatekeepers have bearing on their mediation of valuable cultural capital, their taste will also have bearing on the selection of artefacts to be included in corpora.

Since corpora have analytic purpose, they must be compiled based on selection criteria that are aligned with the eventual analysis.

'Inclusion', 'alignment' and 'consideration' criteria are proposed; the categories of criteria have differential application in the selection of artefacts.

Recommendations

It is recommended that the role of design educators as domain gatekeepers is researched (especially pedagogic actions which determine the validity of cultural capital such as the continuous assessment and value judgment of novel artefacts).

It is recommended that in the compilation of design corpora, educators select artefacts based on a set of criteria and are not solely reliant on their own frames of reference or taste.

It is recommended that selection criteria are compiled which have bearing on the analytic purpose of the corpus.

In summary

When selecting novel artefacts worthy of emulation the domain gatekeeper will make tacit declarations of what is valuable, interesting or essential in design. The subjectivity of the gatekeeper can be mitigated with the use of selection criteria; this may have surprising results when the gatekeepers start to question their own taste and motivations.

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ADDITIVE MANUFACTURING IN 3D PRODUCT DESIGN AND DEVELOPMENT PRACTICE: AN INTERDISCIPLINARY SHIFT

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Abstract

This paper reflects on aspects that impact on an interdisciplinary shift motivated by technology-transfer within a University of Technology (UoT). Discussion focuses on the integrated use of Additive Manufacturing (AM) as automated layer by layer 3D printing product design and development technology within a 3D Art and Design studio-practice environment. As emerging technology, AM's impact has redefined the procedural framework and required knowledge coherence for the development of 3D objects.

The paper takes a subjective approach to education and a culture of practice by identifying required knowledge coherence embedded in various interdisciplinary procedural actions that facilitate the use of AM technology in 3D product design and development studio-practice. The underpinning theoretical framework is located within a Constructivist paradigm marking a shift from discipline based learning to interdisciplinarity. This suggests that "procedural, student-centred" actions are defined by applying an inductive approach to knowledge generation, structured around emerging theoretical concepts. The paper explores synthesizing, constructing and producing as constructs that determine 3D studio-practice actions. Within each, a causal relationship exists between the actions that students take and the learning outcomes achieved.

In conclusion the paper proposes that students should be stimulated to engage in autonomous non-linear 'procedural, student-centred' actions, governed by technology driven improvisation, modification and evolution methods affiliated with 3D AM product design and development. Therefore, as reflexive practitioners students should demonstrate the facility to generate problem solving interdisciplinary incubation spaces rather than merely act on a discipline specific technology based problem solving strategy. Findings from this paper make a theoretical contribution to knowledge that expands on the interdisciplinary technology-transfer of AM technologies at a UoT.

Keywords: *Interdisciplinary, Additive Manufacturing, 3D Product Design and Development, Knowledge Coherence, University of Technology, Student-Centred.*

Introduction

Contemporary Art and Design practice demonstrates that cutting edge digital manufacturing technologies continue to permeate creative industries often resulting in distinctive hybrid outcomes. A perspective adopted by most Universities of Technology (UoT) within South Africa (SA), is to encourage interdisciplinary and transdisciplinary tertiary practice, "[…] to promote relevant research and development and to assist with the transfer of appropriate technologies […]" (SATN 2012). South African UoT's present an ideal context for the integration of emerging technologies, thereby presenting a platform that aligns educational practice with industry needs.

Currently, Art and Design programmes at most UoT's in SA focus largely on discipline specific methods and techniques embedded in traditional modes of practice. The integration of Additive Manufacturing (AM) technology into 3D Art and Design studio-practice at a UoT presents fertile ground to develop a sustainable

framework for interdisciplinary technology based teaching and learning. The 3D printing technology termed Additive Manufacturing can be defined as the process of joining materials to make objects directly from 3D computer modelled data, using a layer upon layer automated manufacturing process (ASTM International Committee F2792, cited in Wohlers Associates 2010). Over a period of time this technology has been developed to print in a variety of materials, offering varied surface finishes and has the ability to print 3D form of varying complexity across several 3D industries: art, design, fashion, architecture, industrial, engineering, medical, film and animation.

At present few UoT's within South Africa have aligned their 3D Art and Design curriculums to include emerging AM technologies. Of the six UoT's in South Africa, the Vaal University of Technology, Vanderbijlpark and the Central University of Technology, Bloemfontein have aligned a portion of their 3D Art and Design curriculums to include computer aided manufacturing technologies. Both these Universities have well established AM technology stations that strategically engage with industry, therefore ideally positioned to partake in informal institutional technology-transfer and incubation initiatives within academic programs. Technology-transfer and product incubation initiatives yield maximum impact if Universities generate opportunities and resources for transdisciplinary interaction (Strom 2012, p. 8, 9).

Interdisciplinary practice

Advances in technology are propelled by globalization, which subsequently transforms conceptual and technical boundaries for most artistic product design and development activities. Globalization largely represents interdependence and interconnectedness, and is therefore stimulus for the constant need to review teaching and learning strategies within educational practice. As technology evolves it has become increasingly difficult to define discipline as a concept. The difficulty in definition is due to a discipline's body of knowledge continually adjusting to new ideas and applications (Hand, Mitrovic & Smyth 2010). Lack of clarity on what constitutes disciplinary knowledge holds significance when defining terms such as multidisciplinarity, interdisciplinarity, crossdisciplinarity, transdisciplinarity and postdisciplinarity. The literature offers varying opinions on what these terms specifically refer to. For the purpose of this paper discipline is defined by demarcating the boundaries of knowledge through acknowledgment of the field of specialisation according to the educational program. A shift to interdisciplinarity then challenges the disciplines' hold on knowledge and thereby more clearly defined in the context of a specific practice (Reybold & Halx 2012, p. 323, 324). Within this framework the context and practice of integrating AM technology within Art and Design programmes at UoT's is considered interdisciplinary practice.

Artists and designers continue to align their practice with technological developments, and in some instances are regarded as "hybrid-practitioners" (Rodgers & Smythe 2010). This indicates that contemporary artistic practice has surpassed traditional modes and embraces the interdisciplinary use of emerging technologies in various areas of product design and development. A fundamental challenge that confronts Art and Design educators is to constantly adapt curriculum content and teaching and learning strategies to align with the rapid advances in technology. The educational environment's neglect to adapt to developments in technology presents a challenge that could contribute to a disabling learning environment if not addressed (Asim, Oğuzhan & Ayşe 2011, p. 41). The inclusion of AM technology within traditional Art and Design programmes at UoT's in SA presents such a challenge. In order to avoid a disabling learning environment, 3D Art and Design studio-practice teaching and learning would benefit from an interdisciplinary "procedural, student-centred" approach that facilitates the integration of AM technology.

When introducing interdisciplinarity into a field, educators should be mindful that it should not replace the knowledge base of a particular discipline but should remain reliant on fundamental disciplinary knowledge for its further development (Weingart 2010; Frodeman 2010; Moore 2009). Therefore the objective is not to

discard disciplinary constructs but to encourage sustainable interactions with other disciplines by building on a collective approach to knowledge generation (McCulloch 2012, p. 296). Within a UoT the transfer of practical and theoretical knowledge for the integration of emerging technologies across a range of subject areas requires interdisciplinary collaboration, embedded in dissimilar fields. This implies that interdisciplinarity be informed by content based curricula which provides the language and methods of knowing for generating renewed practice (Middendorf & Pace 2004, p. 6).

For interdisciplinary practitioners it is assumed that knowledge should ultimately unite dissimilar fields and therefore in the learning environment interaction takes on many forms, from the inclusion of discipline-specific vocabulary to an interdisciplinary way of knowing (Nowacek 2005). Such an approach is also referred to as "subject-symbiosis" where a teaching and learning strategy within education allows for interdisciplinary and multidisciplinary collaboration to take place (Seely-Brown 2008, p. 99). Within a curriculum structure knowledge coherence forms the criterion for curriculum quality and can be distinguished by how content is selected, sequenced and paced. The transmission of appropriate knowledge coherence through 'subject-symbiosis' and the adoption of a non-linear 'procedural, student-centred' learning approach presents a viable option for Art and Design programmes to integrate AM technology as strategic industry related 3D studio-practice.

Knowledge generation through coherence

According to Biggs and Tang (2007, p. 19) the student learning context refers to the idea that the student's perspective determines what is learned, not necessarily what the educator intends students to absorb. Therefore, teaching for many years has no longer been a matter of transmitting but engaging students in active learning from an individual's student understanding. Suited to this is the application of a constructivist approach to teaching and learning. This involves students acquiring new knowledge from the individual's active learning process, bringing about individual knowledge construction opportunities (Schuh 2003, p. 426). This approach activates the shift from surface learning to deep constructive learning. Conventional surface learning is a minimum effort task-orientated approach that employs low cognitive levels of activity (Biggs & Tang 2007, p. 22). The dimension of a learner's knowledge base is comprised of the following elements: strategic processing or executive control, motivation and affect, development and individual differences, and situation or context (King 2003, pp. 153-156). Therefore, to determine an effective outcome emphasis should be placed on how learning is guided and facilitated. A student-centred approach focuses on the educator's ability to promote active learner engagement; the promotion of learning through interactive decision making; and the educator being a reflective on going learner (ibid). However, to ensure the sustainable interdisciplinary technology-transfer of AM technology into the 3D Art and Design studio-practice environment requires more than the application of the widely used student-centred instruction (Weimer 2013, p. 45). In order to sustain connections between concepts and their applications the teaching and learning strategy should also be embedded with a system of knowledge coherence that is considered in relation to specific interdisciplinary activities and the intended outcomes (Young 2011). The technology-transfer of AM technology within 3D Art and Design studio-practice hinges on the educator guiding a 'procedural, student-centred' approach coupled with transmitting relevant knowledge coherence located in both disciplines.

Knowledge coherence outlines the form of internal curricula coherence, distinguishing between curricula which have conceptual coherence as epistemological core and those which have contextual coherence appropriate to a domain (Parry 2007). The more sequenced the curriculum the more valid the conceptual coherence and clearer the domain within which knowledge is generated. A less sequenced curriculum requires emphasis to be placed on the relationship between coherence and context, where external requirements play a significant role, therefore more suited to interdisciplinary teaching and learning (Muller 2009, p. 216). Conceptual knowledge coherence refers to the interdisciplinary and procedural knowledge base required to prepare students for

occupational field/s. Contextual knowledge coherence reviews and questions specialised occupational practices in terms of interdisciplinary concepts from various curricula perspectives in order to determine commonalities. Professional knowledge coherence questions the significance of each curricula related part and how it enables the student to understand what it is to be a member of a particular profession (Young 2011, 2006a; Muller 2009).

Teaching and learning that includes conceptual, contextual and professional knowledge coherence has the potential to propel knowledge generation beyond surface learning towards a deep learning experience that stimulates high levels of cognitive activity (Biggs & Tang 2007, pp. 21, 24; Young 2011). Integrating AM into 3D Art and Design studio-practice requires a strategy that includes knowledge coherence to support the shift from a sequenced discipline specific understanding to a non-linear interdisciplinary mind set. In this instance knowledge coherence that aligns graduates with essential skills to increase their participation in the 3D product design and development industry. The sequencing and pacing of synthesizing, constructing and producing as non-linear procedural actions for the integration of AM technology within 3D studio-practice illuminates a renewed approach to 3D Art and Design practice for interdisciplinary curriculum integration. Interdisciplinary curricula essentially benefit from having both conceptual and contextual coherence when strategically aligned to a vocational domain (Muller 2009, p. 217; Young 2006a). This also implies that in order to keep abreast with global developments, the approach to knowledge generation within education should continually be reconsidered and critically reflected upon before it is endorsed (Raikou 2012, p. 417).

Additive Manufacturing in 3D Studio-practice

Outlining a sustainable 'procedural, student-centred' framework for the interdisciplinary integration of AM technology in a tertiary Art and Design 3D studio-practice setting has the potential to facilitate informal technology-transfer and knowledge generation that promotes innovation and growth beyond students' current UoT educational experience. As mentioned Universities are increasingly generating opportunities and resources for technology-transfer and industry incubation initiatives. The Technology Transfer and Innovation station located at the Vaal University of Technology's Science and Technology Park is an example of a facility that performs this function. The station stimulates economic activity by linking its rural/industrial environment to the urban environment of Johannesburg and Northern Gauteng (VUT 2013). Located within an educational setting this facility presents an ideal industry related context to facilitate the integration of AM technology into the 3D Art and Design studio-practice setting.

Synthesizing as concurrent approach

Synthesizing as construct in this paper refers to the co-creative collaborative process between the technology user and AM system as transformative 3D Art and Design practice. For product development and design it is essential to identify contextual commonalities from Art, Design and 3D printing domains when integrating AM technology in a 3D studio-practice setting. Establishing commonalities can be used as an educational instrument that blurs boundaries between subject specific content, thereby supporting a 'procedural, student-centred' framework that sustains interdisciplinary teaching and learning practice. The Department of Design and Technology at Loughborough University (now Loughborough Design School) in the United Kingdom, undertook a New Product Development research project that explored solving collaboration-related problems, by successfully integrating technology as an educational instrument. The objective of the project was to stimulate collaboration between industrial and engineering designers through the use of design representations. Technology was used to develop a shared understanding of a design representation system in order to improve interdisciplinary product design and development communication. Findings revealed that both design parties experienced high levels of effective interdisciplinary collaboration when developing a shared knowledge user design representation aid for multidisciplinary teamwork (Pei, Campbell & Evans 2010,

pp. 159-166). Similarly, AM technology as design tool has the potential to advantageously equip graduates to perform as interdisciplinary entrepreneurs essential to the 3D world of work.

Problem solving for designers results in an open ended cyclical process of problem identification and problem solution (Cross 2006; Raikou 2012, p. 421). The effective cyclical approach to conceptual, contextual and professional knowledge generation and sequencing of synthesizing, constructing and producing as 'procedural, student-centred' actions has the potential to enrich 3D Art and Design students with learning experiences that encourage development through self-reflection and critique. This is reinforced by the understanding that an interdisciplinary educational environment refers to the actual crossover of boundary parameters, which facilitates the merging of established and new knowledge between dissimilar disciplines (Rikakis 2010, p. 4; Sullivan 2010, p. 117). Therefore, the fundamental determinant of interdisciplinary collaboration is being knowledgeable of the fact that research questions originate within practice and therefore are reliant on the ability to visualise relationships and structures within a conceptual framework (Nimkulrat 2007, p. 3; Mafe & Brown 2006, p. 5).

It is a common knowledge that the initial stages of developing any 3D product remain reliant on conceptualisation and visualisation skills, which form the most effective basis for developing projects with or without the use of emerging technologies. During the incubation phase of generating an idea, transformative learning entails a shift in consciousness activated by how we construct and reconstruct meaning from our lived experiences (Dirkx 2012, p. 400). Transformative learning as cognitive approach when applied in conjunction with an interdisciplinary informed problem identification, problem analysis and problem solving strategy supports the required conceptual knowledge coherence fundamental to a 'procedural, student-centred' action. Knowledge generation within the 3D Art and Design studio-practice environment therefore requires the conscious mapping of collaborative interdisciplinary practice as synthesized input, which determines an effective outcome.

Constructing as hybrid skill

Students within the 3D studio-practice environment naturally apply tactile modalities when modelling and constructing 3D form using malleable and rigid materials. Much discussion has been focused on how artists approach their work from positions of manual creators and digital selves when exchanging and integrating both procedures (Bowen 2010, p. 219, 220). Studies on modes of knowledge generation reveal that the construction of knowledge through the application of new content often stimulates procedural cartographic memory, also referred to as prior allocentric knowledge or tacit knowledge (Lafon, Vidal & Bertoz 2009, p. 541). Within the realm of aesthetics and perception, Richard Wollheim (1984) has also defined this concept as the artist and/or viewer being imbued with "cognitive stock". Touch and gesture as implied procedural knowledge actions prompted by prior knowledge function as an educational tool that has the potential to facilitate the shift from traditional hand skills to the digital realm. When engaged with interdisciplinary collaboration students should benefit from constructing new knowledge by drawing on prior allocentric memory embedded within their discipline specific fields.

Students need hands on experience and manipulative instructional resources guided and facilitated by; the educator's ability to promote active learner engagement; the promotion of learning through interactive decision making; and the educator being a reflective on going learner (King 2003, pp. 153-156). 3D Art and Design studio-practice instructional resources should place emphasis on the sensory modality which is regarded as a stronger modality and is known to achieve a more effective outcome over first development auditory and verbal modalities (Honigsfeld & Dunn 2009, pp. 221-223). 3D Product design and development is definitively dependent on contextual knowledge coherence which implies that students engaged in the process of developing a product require a reciprocal understanding of technique, material properties, manufacturing processes and final product

assembly in relation to a specific domain. This reinforces the notion that the interdisciplinary integration of AM technology should not take place at the expense of abandoning 3D Art and Design discipline specific attributes, hence the inclusion of a teaching strategy to unlock allocentric prior knowledge. When using AM technology in 3D Art and Design practice both hand-skill and digital 3D studio actions share commonalities such as conceptualisation, object visualization, real and virtual world 3D constructing and modelling, and a range of AM technical know-how. This indicates that for the autonomous creator, a non-linear 3D studio-practice 'procedural, student-centred' framework requires renewed approaches to constructing as contextual knowledge coherence that accommodates the shift from traditional hand-skills to the digital realm.

Producing as automated process

In a culture that has become increasingly reliant on computers, automated product development raises issues on how digital technologies are affecting manual modes of art production. The seductive authority of digital production and the artists' yearning for the physicality of the material art object stimulates thinking about technology beyond mere function and raises debate about the technology in relation to authenticity. Walter Benjamin's (1969) seminal work "The Work of Art in the Age of Mechanical Reproduction" cautioned against technology denying the material "aura" of an artwork. Benjamin's (1969) theory suggests that the original artwork determines the prerequisite to the concept of authenticity. Current thought claims that mechanical reproduction releases the work of art from the "aura" of authenticity and therefore it ceases as prerequisite (Pinney 2002, pp. 4-6; Blythe 2001). Although AM systems are able to print in materials of quality, permanence, value and allow the freedom of almost unlimited complexity (Dean & Pei 2012), as automated ubiquitous process it still re-enters this contentious debate.

Shifting away from a linear discipline specific approach to teaching and learning allows curricula material to navigate students to understand what it means to be a member of an interdisciplinary product design and development profession. Hybrid aesthetic strategies examine the symbiotic relationship between art and technology, and thereby establish margins for future interdisciplinary technology-transfer. Presently these margins are bound by a state of tension between the position of new technology and the location of educational programmes, which continue to define how qualifications and their subject offerings are presented. According to Long Island University, New York curriculum instruction professors Choi and Piro (2009, p. 29-32), technology has become the new "alpha competency" and an indispensible skill for the future where cultural barriers dissolve in cyberspace. Students should therefore not be required to specialize in terms of their technical competency but rather form a theoretically informed mode of practice related to concept, context and profession.

This mind set is displayed in British artist Michael Eden's (2013) approach to practice, who explores the transition from traditional Ceramics hand-building skills to the digital realm by using 3D ceramic printing technology (See figures 1 & 2). Eden produces ceramic artefacts by way of dissecting and constructing form, exploring the relationship between the virtual and the actual, using primary geometric forms and mathematical models as vehicles. Being trained as a traditional Ceramicist has allowed Eden to develop a fine tuned sensibility for manipulating form. The automated ceramic AM process has allowed Eden to develop a sense of implied knowledge, where touch and movement are as important as sight in the subtle investigation of form. When using AM technology, Eden explores the ceramic vessel as a familiar distinctive object. However, the aesthetic nature of the automated AM process, transforms the representation of everyday functional object to be read as a paradox, an object containing an object or simply a void.

Figure 1. *Maelstrom IV*, 2011, M. Eden.

Figure 2. *Bloom*, 2010, M. Eden.

The world of work requires "hybrid practitioners" (Rodgers & Smythe 2010) and often when entering graduates find themselves insufficiently equipped to engage with the broad spectrum of industries using AM technologies. Theoretical and practical instances show that the application of a non-linear 'procedural, student-centred' product design and development strategy has the ability to inform an interdisciplinary knowledge base suited to a UoT 3D studio-practice setting. This allows students to emerge equipped with the potential to evolve from mere producers of aesthetic objects to understanding the product development cycle affiliated with the interdisciplinary practice that industry requires.

Conclusion

Art and Design curriculums at Universities of Technology (UoT) are usually procedurally conceptualized and therefore largely based on how to represent and analyse discipline specific contexts. Applying a non-linear deep learning approach to teaching and learning in 3D Art and Design studio-practice facilitates improvisation, modification and evolution methods for 3D product design and development. The effective non-linear sequencing of synthesizing, constructing and producing as 'procedural, student-centred' actions for the integration of AM technology allows for a renewed approach to 3D studio-practice. In addition to this, Young's (2011) suggestion to consider contextual, conceptual and professional knowledge in relation to one or more related disciplines enriches the knowledge coherence needed to define AM technology in 3D Art and Design studio-practice. Together these allow the educator to anticipate stimuli that facilitate active 'procedural, student-centred' collaboration. The integration of emerging AM technology is therefore viewed as new knowledge-construction for which the learner draws on traditional Art and Design practice as essential link to prior knowledge (Schuh 2003, p. 427). The integration of knowledge coherence coupled with access to prior knowledge within a 3D Art and Design studio-practice setting proposes to enable graduates to construct interdisciplinary knowledge that generates innovative solutions to industry's creative problems. This approach allows students to function as interdisciplinary reflexive practitioners that demonstrate the facility to generate problem solving incubation spaces, rather than merely acting on a discipline specific technology based problem solving actions.

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INTERACTIONS: SHAPING THE SPACES WE INHABIT

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Abstract

A.W. Sprin's definition of landscape as a process of the "mutual shaping of people and places" implies that the inhabitants of any space are implicated in, but also susceptible to, the shaping of their surroundings. This paper examines such interactions by theorising landscape as embodied, individuated experience of place in relation to representations of landscape. The Vaal Metropolitan area is reflected on in terms of the researcher's experience of place, where experience of place refers to the consideration of direct (multi-sensory) perception, memories and prior knowledge as well as imaginings of place. This understanding of experience of place is based on a combination of theories of place from the writings of Edward Casey, J.B. Jackson and David Seamon, would therefore include representations of the landscape displayed publicly, such as real-estate advertisement boards and artworks. Works from the 'THIS PLACE: Engaging with where we are, the local' (2012) exhibition, are interpreted in this context as examples of local interaction and representation of the landscape.
Through a discussion of landscape representations created by local artists, about the local area, I aim to interrogate landscape as a medium through which we shape a notion of self as part of a collective or as apart from the collective culture which in turn impacts on the shaping of the spaces we inhabit. Through considering representations of the landscape in relation to individuated experience of the researcher's locality, an image of local cultures of selective valuing, use and abuse of the landscape emerges, providing a reading of landscape representations as interactive processes rather than static views.
Keywords*: Experience of landscape, place, representation of landscape, the local*

Introduction

> *[Bleached-out dry grass, often burnt, dotted with garbage and building waste; Flat, except for trenches and holes dug for no apparent reason. Bare trees line up in the background against a brownish-blue sky in the yellow morning light diffused by mist rising from the river. I drive on to the sound of Gareth Cliff insulting someone on the radio, past an expansive, manicured green lawn surrounding a neat house against a clear blue sky. This sudden interruption of winter is a picture on a signboard for a new housing development. I semi-consciously experiment with different vantage points and focal lengths, wanting to stop and take a photograph, but I drive on to work, with a half-formed image in my mind.]*

Representations shape my experience of the local landscape as much as physical sensation and perception does. Furthermore, representations literally shape the places and landscape and by extension, I argue, the society that inhabits and forms part of these places. The purpose of this paper is to use experience of place as a theoretical framework in reading publicly presented representations of the local area, specifically the exhibition *This Place: Engaging with where we are and where we stay: the local* (2012), an exhibition by the staff of the Department of Visual Arts and Design, Vaal University of Technology. *This Place* was accompanied by a colloquium on the topic to which I will refer periodically in the discussions of the works.

Participants in *This Place* were invited to create works that engage with our own locality with no restrictions on medium or approach. *This Place* refers to the Vaal Metropolitan area, stretching from Sasolburg to

Vereeniging and surrounding area, on both sides of the Vaal River. This place is classified as rural, but is known for its heavy industries (developed here because of the availability of water) and student protests since 1976.

The title, *Landscape interactions* is in a sense tautological: According to Edward Casey (2001:417), the word landscape already implies interaction. A careful consideration of the various definitions of landscape that have evolved in recent theory, however, indicates that the interactive aspect of landscape has been neglected until the emergence of human geography in the 1970s which coincides roughly with the emergence of land art in the late 60s (Moffat 2007:np). It is interesting to note that, from the start, human geography theorists referred to and critiqued landscape representation practices because such practices are seen to encapsulate any given society's relationship to and ideas about the land[12]. Jeff Malpas argues that indigenous relationships to place which are "established and sustained, not through the exercise of authority over the place—through ensuring one's own exclusive access to it—but rather through journeying across it and through the stories that such journeying embodies and expresses" (2008: np). This statement emphasises the fundamentality of representation to human relationships to land, together with the significance of movement through the landscape which emerges as a central theme in this paper.

When I Google 'define landscape', the recurring definitions amount to the same "more than three hundred year old" definition that John, B Jackson scrutinized in 1975: "a portion of land which the eye can comprehend at a glance" (1975:1). Most definitions refer to 'looking at', picturing and representing a portion of land and not 'living in the physical land', preferencing the visual over the other senses. A combination of phenomenologist Edward Casey (2001:417), and geographer Jackson's (1975:7) ideas explain landscape as a *composition of places on the land.* Yet, in terms of our "visual experience of our everyday worlds" (Jackson 1975:8), landscape is still also "A portion of the earth's surface that can be comprehended at a glance" (*ibid*.) encompassing both "nature and changes that humans have effected on the natural world" (Wells 2011:2).

The understanding of landscape is therefore dependent on the understanding of place, which Casey describes as "the immediate ambience of my lived body and its history, including the whole sedimented history of cultural and social influences and personal interests that compose my life-history" (2001:404). Casey's description of place could still be visualised as a frozen scene (Cresswell 2009) (much like a photograph). Anne Winston Sprin's (2010:92) conception of landscape as the "mutual shaping of people and place", however, foregrounds landscape as a continuous process of interaction rather than a passive object of aesthetic appreciation and activity or resource. According to Seamon, place is a monadic concept in that, "human beings are always conjoined, enmeshed, and immersed in their world. In other words, a relationship that is assumed conceptually to be two (people/environment) is lived existentially as one (people- environment intertwinement)" (2011:4).

While this "mutual shaping of place" occurs through a variety of phenomena, in this article I will focus on representation as a manifestation of how individuals and groups shape and are shaped by places, which invariably refers to other shaping processes such as the use and over-use of resources; access and restriction of mobility (current and historical). These processes are indicative of the kind of people and social/political structures that have shaped the landscape, and in turn the very society responsible for these processes. Landscape is therefore not created by the artist or designer. It is a continuous process that the inhabitants/visitors of an area engage in through their daily activities, habits of movement (Seamon, 2000:2) and acts of representation. Over time, human plans, needs and purposes change, resulting in a more or less haphazard evolution of the landscape.

> *[In spite of resolutions not to, I lose my temper (again) at a taxi that turns in front of me and stops. The road works are progressing quite fast. Soon the red earth base will be covered with grey. I brake hard*

[12] See amongst others publications by Cosgrove (1984), Meinig (1979), Appleton (1996) and Tuan (2001).

for a teenager crossing the road without looking. This is what I get for being late. Once my son is safely in the school grounds I relax, my mind starts to wander, out over the private game reserve - no mist to day over the river. The light is crisp and clear on the increasingly dilapidated big properties on this side of the road].

Method

This paper reports on a process of reflection on 'being in place' (with a camera) that forms part of a larger research project in progress exploring my own landscape photography practice and the processes involved in creating photographic landscape representations. I work with experience of place as a key concept in landscape representation in an effort to transcend the duality of observer/occupant inherent in landscape photography traditions, but also to some extent dictated by the photographic apparatus.

Experience of place does, however, not merely consist of direct sensory perception, but also depends on other levels of consciousness, namely memories, anticipation and imagination, accoridng to phenomenologist Robert Sokolowski (2000:85). It involves the physical, emotional and intellectual aspects of human existence, which Edward Relph (1976:9) explains, forms a continuum between direct perception and abstract thought. Experience of place furthermore occurs in time and space and is characterized by movement and mobility as well as moments of rest and encounter (Seamon 1994:2,3; Unwin & Adams. 2008:67; Cresswell 2009:7). This notion of movement and mobility as a central characteristic of certain locations has been explored by Augé through the concept of non-places (1995).

Cresswell however cautions that a preoccupation with experience over-emphasises the role of the individual and disregards the unavoidable impact of power structures and the social construction of places. Casey's explanation of place mentioned earlier, however, takes these forces into account when he refers to "the whole sedimented history of cultural and social influences" (2001:417) on place. While experience of place in necessarily individuated, it cannot be divorced from the social and political structures that shape the places.

Through considering representations of the landscape from the theoretical perspective of experience of place, but also in relation to individuated experience of my own locality I aim to provide a reading of landscape representations as interactions through which we contribute to what Christopher Tilley describes as the "sedimented layers of meaning" (1994:18) that make up a landscape rather than static views steeped in ideological overtones. Through publicly displayed representations we do not only shape the landscape, literally, but we also shape our relationship to the places represented. Representation is a form of naming; making accessible and thus giving meaning to a location which transforms it into a place (Tilley 1994:17-20).

This Place

[In my rush I forgot my phone at home. Now I'll have to rely on my own sense of direction and I'm cutting it fine as it is. I take the highway. The sun is low and colours the layer of low-lying smoke in the cold sky.
I did not realize the squash courts are so close to Sasol. The huge flame tower looms up over me against the night sky as I turn in to the courts - just in time.]

Figure 1 Thinus Mathee, 2012, *26° 46' 33" S,* Pigment ink on archival paper, 200x70 cm

Figure 2 Thinus Mathee, 2012, *I See You,* Pigment ink on archival paper, 20 x 20 cm

Figure 3 Thinus Mathee, 2012, *I See There,* Pigment ink on archival paper, 20 x 20 cm

As a whole the exhibition *This Place* offers the full gamut of human experience represented in varying intensities: memory and history, spirituality and imagination, emotions, and physical sensory perceptions.

Through the variety of disciplines and media used in this exhibition a complex understanding of the Vaal landscape emerges, with each medium and discipline lending itself to different ways of engaging with the local.

The medium of photography is best suited to the description of visual phenomena, but in the works of Thinus Mathee, instead of describing the place, he comments powerfully on the relation of the human body to place and space. Mathee presented two sets of images: a pair of panoramic prints depicting expansive skies, and a set of four square images of moments captured while driving, through the car window. The panoramic set, foregrounds background (Mathee 2012:np). We are invited to look at the great expanse and drama of the skies over the Vaal area as a setting for our everyday lives. With no reference to scale except a distant lightning bolt, it is difficult to comprehend the vastness of the view that is included in the frame and contained by the dark edges of the images. If I was to stand outside and look at the area of sky depicted, I would have to physically move my head from side to side and up. Mathee combines various "single glance[s]" (Wells 2011:2) into one. This disruption of our sense of scale, perhaps more than the subject matter that is associated with the 'heavens', evokes a spiritual experience in that it allows a perspective beyond human visual capabilities.

This work expresses the desire to look beyond the everyday, to find the spectacular in the local, without yearning for somewhere else. This drama is to be found here, where I am writing, in the Vaal area. It is the background to the everyday scene. On the opposite wall, as it was displayed in the gallery, Mathee offers precisely these everyday moments. We now take note of the sky as background which invokes memories of car fumes and polluted air. These images show the habit of moving from place to place as integral to understanding the Vaal area, where many people regularly drive, cycle or even walk from town to town. The perspective from the car window gives us a sense of the speed of the car, and the distances involved.

Figure 4 Therese Scholtz, 2012, *Captured,* Various materials, Variable Dimensions

The set of three garments titled *Captured*, by Therese Scholtz, provide a very different perspective on the human body in relation to place in that she uses garments (that envelop the body) to reference the industrial structures and the Vaal River that are emblematic of the area. The layered textures of grey and white contrast with the felt flowers with their organic shapes, textures and colours that emerge from the garments as if escaping envelopment. Scholtz' garments encapsulate her acceptance of having to live in an environment that she feels alienated from while yearning for other places.

Figure 5 Avitha Sooful, 2012, *Conversation Please,* Coal dust and metal Installation

Avitha Sooful shares Scholtz' discomfort with the heavy industrial and mining landscape. Sooful's work is however much more forceful and critical of the threat that heavy industries pose to human well being. *Conversation Please* consists of a coal-dust covered floor with heavily rusted chair frames placed on the coal, as if inviting the audience to sit down and have a conversation. But the chairs are not functional and the coal dust is repulsive in its promise to turn everything that touches it black. If it is stirred, it rises up and pollutes the air. The installation poses a physical threat to the human body while referencing the coal mines and iron works that established and sustains the economy of the area. Structures (the chairs) that on face value have been put in place to bring people together have in fact kept them apart and absent. Pollution in the Vaal Area continues even though the hazards and dangers are well known and documented.

Figure 6 Linda du Preez, 2012, *Lifting Myself By My Own Hair,* Mixed Media, Variable dimensions

Linda du Preez' work, *Lifting Myself By My Own Hair,* represents 'this place' as an oppressive atmosphere from which she manages to lift herself, but with considerable vertical force. The material used references the body and mind in the use of hair-like but also brain-like platted and knotted twists that extend up and down from geometrically fitted PVC elbow-joints that resemble various other joints in the human body. The work speaks to human experience, namely integrated emotional and physical experience of the artist's place of work. What causes this oppressive atmosphere is not important in this work, but is hinted at in works by Matsepo Matoba, Nkululeko Khumalo and Mashaole Makwela respectively.

Figure 7 Nkululeko Khumalo, 2012, *Untitled,* Etching, 40 x 50 cm

Figure 8 Masempe Matoba, 2012, *African Women,* Pigment ink on canvas, Variable dimensions

Khumalo's etching and woodcut references the history of oppression that haunts the whole of South Africa in a style influenced by struggle art from the 1980's. "History overwhelms us and truth swamps every act of the imagination", writes Michelle Mountain (2010:10), with reference to J.M Coetzee (1987). Khumalo's contribution reminds us of a history that informs the inhabitants of this area and also to a great extent determined the positioning of 'main' town and 'township' areas in a haphazard way (Nieftagodien 2012).

Matoba's work, *African Women,* a series of commemorative portraits of prominent African women that have connections with the Vaal area, by contrast, points out that oppression of African women persists. Khumalo and Matoba focus on the "sedimented history of cultural and social influences" (Casey 2001:404) that make up an integral part of experience of place, mentioned earlier. Makwela's production, *Class of Hell,* in turn represents local townships of unforgiving circumstances that produce harsh people. This locally conceived and produced film focuses on social issues that plague the townships in the Vaal Area and ends disturbingly with the imminent death of the main protagonist and similar fate awaiting his close friend, suggesting that there is no escape from that place.

Figure 9 Poster for *Class of Hell*, 2012, co-directed and produced by Mashaole Makwela

My discussion of the works included in *This Place* paints a grim picture of the VAD staff's experience of local place, but the exhibition as a whole does not communicate a simple negative experience. Reshma Maharajh's interactive installation explores colour as symbolic of emotional states according to the theory of Rasa. Exhibition goers were invited to select a coloured powder based on their emotional state. From an array of suitably labelled powders various colours were added to a backlit container of moving water. Within a short while the water was coloured with swirls of 'emotions'. Emotional responses to place are well documented in literature and the arts, but remain difficult to explain. With *This Place* we find a willingness on the part of the artists to engage with their experiences of place constructively by engaging in the representation thereof.

Figure 10 Reshma Maharajh, 2012, *Untitled,* Mixed Media interactive installation

In my own work, *Between Three Rivers*, I built up photographic images around the path of the Vaal River between the Sugarbush- and Klip Rivers along which I frequently walk, run, cycle (where I can get access) or drive. The line of the image represents the river's edge, and the images are silhouettes of what I could see around this edge against the sky or water, over a period of more than a year. Most of these little scenes are not aesthetically pleasing in the picturesque sense, yet the resulting image is true to the sense of serenity I experience when I move around this area. I have come to accept the torn-up river banks, earth and trees; the junk and sometimes dead animals that litter the area. These aspects come about because we have access to the river here. We can fish, walk and drive our noisy quad-bikes. Human activity, use and abuse of the open areas, together with the natural elements, interact very directly to form the character of the places that are connected in this image.

Figure 11 Anneke Laurie, 2012, *Between Three Rivers,* Pigment Ink on Canvas, 300x75 cm

[All along the river road from Three Rivers to Vanderbijlpark are advertisement boards for housing developments. There is no present for the places where these boards are planted, only a promise of a future in perpetual summer. Further along the road from Three Rivers to Vanderbijlpark I drive past equally summery promises of fun and relaxation by images of water sport and leisurely cruises on the river. Opposite these signboards is an old Yskor housing project. Pedestrians who walk from here to work have to wait long to cross. No motorist stops at the faded 'zebra stripes' any longer.]

Conclusions

From the discussions of the exhibition as a whole and the various representations of place exhibited, it seems evident that the theoretical context of 'experience of place' is fruitful, providing an alternative to more traditional approaches such as ideological readings or aesthetic critiques.

Contemporary theories of place and space are not only illustrated but also extended in a number of ways. Various works developed understanding of place as defined by yearning and longing for other places. Through reference to physical human mobility, emotional yearning and imaginings, place is represented as not only what is here and now, but also through history and what is imagined or feared for the future of a place.

The exhibition highlights the paradox of place in that it can both sustain and threaten human well-being, as the local industries of the Vaal area do, by sustaining the economy but at the same time causing pollution and defacement. In this, nostalgic notions of place-attachment and '*genius loci*' or the 'spirit of place' are challenged. Through this consideration of visual representations in terms of experience of place, The Vaal Area emerges as a highly industrialised, yet rural place that is characterised more by characteristics of non-place than place in that "marked by a lack of attachment, by constant circulation, communication, and consumption that act against developing social bonds and bonds between people and the world" (Cresswell 2009:6).

Through this exhibition, and my discussion thereof, another layer of meaning has been deposited (or perhaps eroded), shaping the visitor and local's experience and understanding of the of Vaal area. As Andreij Wiercinski states, "understanding is a participation in meaning. (Wiercinski n.d.)".
Reading landscape representations from the perspective of 'experience of place' is one step towards transcending the duality of observer/occupant; insider/outsider. It draws attention to the interactive nature of landscape and our surroundings. Every inhabitant of a place has an active role to play in the shaping thereof.

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Praxis of Design Education to the current Digital Culture Student

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Abstract

If "Design is shaped by the community and community shapes design" (DEFSA 2013 brief author), then how do we teach design to a culture that is engrossed within the ever-changing information age, what is the impact of this ethos on the current day designer and design?

Today's student is inclined to have an ethos that is different to students from as short as five years ago; post 2007, the year that social media started to be commonly used by South Africans, thus changing their ethos of design and continues to change as the digital information age develops.

This paper looks at a design class, on third year level, as the Design Culture described by the conference outlines; understanding the dualism at play on the design process and the class group as the community. It investigates the culture that does not hold onto information, but has access to information at the press of a button. This investigation aims to understand the nature of this constantly changing culture and the influences the information age has on the ethos of a design culture. It investigates how teaching has to adapt to serve this digital culture and how learning happens within it. The paper considers the changes to the praxis of design; process of design, the nature of creativity and the communication of design within this ethos, the challenges and potential for growth that the information ethos brings with it. It aims to contribute to the discourse surrounding praxis of design teaching to today's constantly changing, network driven design culture.

In conclusion this investigation considers the influence of the digital culture on design cultures and aims to act as a catalyst to design educators to enrich the understanding of the cultures they are involved with and aims to contribute to the praxis of teaching design to a continually changing culture on the fringes or outskirts of the educator's own culture.
Keywords*: Digital Culture, Praxis, Design Process.*

Introduction

Today's student is different to students from as short as five years ago; post 2007, the year that social media started to be commonly used by South Africans, thus changing their ethos of design and continues to change as the digital information age develops. It is also evident that a larger gap between students and educators are developing (Xiaoqing, Yuankun & Xiaofeng 2013)
The introduction of computers into society over the last thirty years has changed the world and our society irrevocably; Marc Prensky (2001) calls this a singularity – an event which changes things so fundamentally that there is absolutely no going back.

Prensky defines our students today as 'Digital Natives'; someone who speaks the digital language of computers, video games and the Internet. In general, some refer to Digital Natives as anyone who was born after 1980 (Herther 2009). On the other hand then, 'Digital Immigrants' is the term used to define digital users

who was born before 1980; someone who had to learn the digital language after their formative years (Prensky 2001).

This investigation considers the influence of the digital culture on design cultures and aims to act as a catalyst to design educators to enrich the understanding of the digital culture they are involved with. It aims to contribute to the current discourse surrounding the praxis of teaching design to a continually changing digital culture that is on the fringes or complete outskirts of the educator's own culture.

It looks at a design class, as a broad overview of all student year groups, as the Design Culture (described by the conference outlines), and at the design process as the product of design that is being influenced by the culture and vice versa.

The paper attempts to analyse possible changes to the praxis of design that can enable educators to be relevant in educating the current digital student. It considers the challenges and potential for growth that the digital age brings with it.

Methodology

Through literature reviews the different cultures; digital natives and digital immigrants have been studied, analysed and compared. General observations of first to fifth year students form part of the study and act as a validation of the literature reviews. Working towards a new praxis of design education investigations into the cognitive development of students and educators, the design process, the educational content and the design literacy of student and educator have been considered. In conclusion, an initial framework for the new praxis of design education has been formulated as the author's first attempt to understand the changes that needs to take place.

Design Culture

Today's student: Digital Native

By now the definition of the digital native has been established and a deeper look into their characteristics and their way of processing information follows.

Digital natives have learned to adapt to their environment in a different way, some better than others. They enjoy multi-tasking and parallel processing; they are used to receiving information at a fast rate with a high turnover rate. They prefer to randomly access information over a set path of access, graphics are preferred above text and networking is at their core, they thrive when instantly gratified and frequently rewarded. These students have grown up with constant digital connection to society and information whether it is through texting, social media chats, or the constant bombarding of flashing images of music videos on the television screen. (Prensky 2001)

Unfortunately some digital technology has had a negative influence on the digital native student. The large amounts of time spent watching television has impacted on student's cognitive development, educational achievement and has caused disrupted concentration spans. This is a result of the over stimulation through passive digital media such as television. (Bittman, Rutherford, Brown & Unsworth 2011). Although this has been the result with passive digital media the contrary has been proven for interactive digital media. Research into interactive media, such as computer and television games, shows that students are able to concentrate for long periods of time. It seems that students have short attention spans for the old ways of learning; they

thrive on interactivity and receiving feedback immediately after an action. This should further more prove to the educator that the teaching praxis needs adjustment. (Prensky 2001)

Although, multi-tasking, random-access to information, parallel processing and graphic awareness has improved in the brain processes of the digital native; reflection time has shortened or is even absent in the digital native's thought pattern. This can be due to the fast pace nature of their digital world and therefore not leaving time for reflection. This is a seriously needed part of any thought or design process and educator should be aware of this to be able to include debriefing times as part of the feedback process of design education (Xiaoqing, Yuankun & Xiaofeng 2013).

On the topic of content and the measure of competence and comprehension of the content that the digital native student has we can refer to two terms: 'future content' that relates to digital content and any content that might still be developed in the future, and 'legacy content' which refers to content that is in traditional format, i.e. print format (Prensky 2001). Digital natives score high in the competence of understanding and using future content, but are slow in processing legacy content (Li & Ranieri 2010). My observation is that students don't hold onto information like what they did in the past; it is more important to them to learn how to search out good information than it is to store all the information in their brain's memory. If I have to compare students to technology they are not hard-drives anymore but rather search engines.

The students' constant attachment to social media has caused tremendous peer pressure which is inflicted on them by themselves; by constantly publishing their own lives the current digital student exerts pressure on its community as well as being subdued by the pressure of constantly being in the limelight of the opinions of its peers. The outcome can be that students do not have a high self-esteem without being affirmed by their peers and lecturers. This might result in a 'needy' student that has to ask questions all the time and battle to make decisions by themselves (Xiaoqing, Yuankun & Xiaofeng 2013).

My observation is that digital native students still have most of the positive characteristics of pre-1980 born students; they are inquisitive, eager to learn, can work for long hours and keep their attention on something that is relevant to them. I believe that they are bombarded with information and have very little reflection time that they do not know how to validate the quality of the information. I believe that if we understand these characteristics of the digital native student we can adjust our teaching to accommodate for their needs and the outcome can be remarkable. We also need to understand where digital immigrants come from in order to understand the gaps in communication.

Today's lecturer: Digital Immigrants

Although it has been generalized that the digital immigrant is someone who was born pre-1980, that is only a major generalization and a lot of people born before that date has been able to adapt and learn the digital language. Although a fairly high competency level can be reached, this will always remain like a second language to this group.

Digital immigrants that have not developed a competency with this digital language will often have ideas such as turning to the Internet as a second source for reference, or printing out an email to file it. Digital immigrants don't easily understand the new-found skills of digital natives because they were taught in a slow, step-by-step manner (Prensky 2001). Digital immigrants battle to understand that learning can be fun, and that learning can happen while doing something else; for instance listening to music or having the television on in the background (Xiaoqing, Yuankun & Xiaofeng 2013).

Digital Immigrants do not score high on the scales of future content, but they score high on the scale for legacy content (Li & Ranieri 2010). This is understandable as they were taught using printed materials.

All these factors contribute to the divide between digital natives and digital immigrants. Educators that form part of the digital immigrants are constantly confronted with this divide and my observation is that they resort to the conclusion that students are 'different than they used to be' and 'students just cannot learn' certain things. This can come across very as a negative opinion on the current day student, and can be transferred to the student unknowingly.

One of the largest problems that this digital divide has brought into education is the compatibility of communication between digital natives and digital immigrants. This resulted in a discourse that has been going on since the early 2000's on how the education praxis can be changes. Some ideas have been formulated, but I am of the opinion that this new idea of teaching is still only at its infancy years and that we, as educators, still have a lot of rethinking to do in this matter.

Towards a new praxis of design education

Setting out on this journey towards a new praxis of design teaching is a challenging task. The design process, educational content, digital literacy are all areas of concern in this journey, not to mention whether it is physically possible for digital immigrant's brains to adapt to a new thought process at their developed stage of their lives. Although these challenges exist, it holds a lot of potential to unlock a new world of understanding between digital native and immigrant, if the challenges can be overcome.

Marc Prensky has a very specific solution to this problem of how we need to be changing our teaching approaches; he develops computer games, that speaks directly to the students understanding and style of learning and he works the content of the game so that the student can learn so same information but through this platform. He claims that a student is able to memorize 101 Pokémon character's names, attributes and abilities, why should a student not be able to memorize historic events and other facts in this same manner. (Prensky 2001)

Prensky suggests that the students become part of the redesigning process of this new methodology of teaching and that they hold the clues to what their needs are to be able to adapt and keep adapting in the world that is rapidly and perpetually changing. (Prensky 2001)

Prensky's specific praxis of education is not necessary the solution to the design education setting. Through understanding cultures of the digital native and –immigrant, and through research into the challenges mentioned above I will contribute to the discourse surrounding the journey towards a new praxis for the design education.

Cognitive development

There are two questions that come to mind when thinking about the physical requirements of digital literacy and learning a new skill at an older age: Is there a difference between the digital native and the digital immigrant's brain, and can digital immigrants train their brains to develop digital literacy?

Nancy Herther (2009) has investigated these questions in her paper; Digital Natives and Immigrants – what brain research tells us. Her interview with psychologist Gary Marcus answers the first question very simply: "I seriously doubt that there is any significant difference in the genetic makeup of people born before and after 1980, but experiences can indeed radically alter our cognitive capabilities – that's why we send people to

school!" (Herther 2009). The second question is answered through neuroscientific terms neuroplasticity and malleability. Recent brain research has shown that the brain is constantly restructuring itself in order to facilitate new though processes, this is known as neuroplasticity (Prensky 2001). Research has also shown that our brains are malleable to grow and change if stimulated, that leaning happens with difficulty and that that process actually shapes the brain (Prensky 2001).

This indicates that any person can learn digital literacy at any age, experience at a younger age is advantageous, but not a prerequisite. With the development of user-friendly digital technologies and online services it is much easier today to equip digital immigrants to interact with digital interfaces and become more digitally literate (O'Brien & Scharber 2010)

Design process

Educators can introduce the students to the principle of problem solving and decision making and where educators can enable them to rank all the design problems related to the over-arching problem in order of importance that will enable them to find their own way of designing. Thereby boosting their design confidence and have a graduate that can walk out of university that understands a problem and have the first few tools to know how to tackle the problems they will encounter, as well as a student that is able to analyze new problems that have not yet surfaced in the world as we know it today. The usage of digital technologies in the classroom has enhanced collaborative learning in student groups. (Trespalacios, Chamberlin & Gallagher 2011)

I have encountered that if some current models relating to process of design are enforced on these students that it slows them down tremendously. That supports the theories of Prensky's characteristics relating to digital natives being slowed down when you 'tell' them instead of showing them a way (or a principle).

Educational Content

Prensky claims that both methodology and content needs to be rethought and redesigned, and that content needs to be split into two categories: 'legacy' and 'future'. Legacy refers to content relating to reading, writing and understanding writings of the past, while future content refers to everything relating to digital technology but also social, ethical and political content to prepare the student for a world that is constantly changing in these aspects.
Carneiro and Draxler supports the inclution of legacy content to form an integral part of any education programme as their research shows that having a sense of history, humility and wisdom founded through the knowledge of past events builds national pride and peace (Carneiro & Draxler 2008).

It is important to teach both legacy and future content, but the ratio of amount of each of these has to change. Educators have to change the way they communicate to students, not changing what is important, but only the style in which this important information is conveyed. (Prensky 2001)

Digital literacy

Through studying and analysing these two groups, the digital native and the digital immigrant, it can be summarized that there are two major scales of measurement; the scale of digital literacy (future content) and the scale of print literacy (legacy content). The digital native measures highly competent on the digital literacy and fairly low on the print literacy, and the complete opposite is true of the digital immigrant, measuring high on the print literacy and low on the digital literacy.

The challenge then lies therein to stimulate print literacy in the group of digital natives and to find a way to stimulate digital literacy in digital immigrants. The question then is whether this divide is possible to cross and if our brains can learn new ways of thinking at these two specific age groups life stages.

Self-efficacy and personal innovativeness with technology forms the basis of digital literacy, and is defined as one's belief in your own capability to perform a specific action; it influences decisions, behaviours and one's emotional response to a specific task (Xiaoqing, Yuankun & Xiaofeng 2013). Educators cannot assume that all students are digital literate or self-efficient with digital media (Watson & Pecchioni 2011). This causes a fundamental problem, especially in a developing country such as South Africa. Some time has to be spent training students in digital literacy as a foundation before specific design training with digital media can begin.

Towards a new praxis of design education

Although critical thinking is already highly encouraged in design fields, this aspect of teaching can be revisited and a fresh look at how students are encouraged to look at preceding works to learn the lessons from the past can cast new ideas into how critical thinking needs to prepare the student for a world that they will work in that has not immerged yet.

Digital means can be implemented to asses learning; examples might be to assess learning through writing a paper on a blog and asking students to interact with each other and the lecture by commenting on the main post as well as each other's comments.

My initial observation and reaction was that students should not be bombarded with knowledge, but the amount of information that is taught should be limited to the minimum design criteria. But through this study that has been proven to be a half-truth.

More time should be spent on inspiring the student to think critically, understanding how to validate first-, second- and third- hand knowledge and learn how to take ownership of situations.

With all the information available students have to learn how to be a good 'search engine' that can select the relevant information rather than a 'hard drive' that can store information to recollect it when necessary. Students need to have the basic knowledge that will enable them to search out the relevant information and apply it, rather than knowing everything.

Conclusion

The question remains that if "Design is shaped by the community and community shapes design" (DEFSA 2013 brief author), then how do we teach design to a culture that is engrossed within the ever-changing information age, what is the impact of this ethos on the current day designer and design?

It is undoubtedly necessary for the education praxis to be transformed to speak to the digital culture student. The culture has an influence on the design process and therefore the praxis of education should have a different influence on the design culture that what it had in the past. The challenge set before the educator is to be able to understand this culture and to work within the means of it.

Most design courses comprise some theory modules and one or a few major design modules; these need to be addressed slightly differently in their praxis of design. Therefor the framework towards a new praxis of design education, that forms the conclusion of this paper, addresses these separately:

Theory coursework

- Theory lessons should be fast-pace and cove a large quantity of information in each session.
- During the lesson reference to a variety of sources should be made that is not dealt with in detail in class – this will encourage students to research it for themselves outside of class time.
- Assignments should be set, not only to cover the limited set of notes or chapters in textbooks that were discussed in class, but also test their researching capabilities to find and validate other relevant information.
- Introduce Internet research into assessment and class exercises.
- The main focus of theory lessons should shift from being information focused to being principle-focused.
- Opportunities should be created where students can provide educators with relevant feedback to inform educators on the way students need to be taught.

Studio work

- Teach the principles to enable a student to help him/herself.
- Keep on stimulating creativity
- Keep on stimulating critical thinking and broaden the students' concepts in order for them to solve design problems that they will have in the world that has not currently surfaced yet.
- Stimulate interactivity in the class and with the educator.
- Give time for students to reflect on their work and learn from each project's feedback the lessons necessary.
- Create ways to give immediate feedback to individuals and the class group.
- Emphasizing of class exercises can provide the platform for immediate feedback to stimulate students and to encourage further self-study outside of the class room.

As mentioned before, this framework is a first attempt to grapple with the idea of new design education praxis. It tries to simplify the complex matter of the digital native student and how educators can adjust minor things to change their communication to this group dramatically.

If today's educator cannot adjust to these new concepts of leveraging information, he/she can stifle the students' learning process and can battle to keep their attention focused on the learning process. The difficult part for the educator is to learn new skills after a long time of a specific teaching praxis. The educator needs to let the design student shape their own community, but still facilitate learning within these new boundaries. Perhaps part of our role as educator facilitators is to structure a framework to enable students to teach themselves.

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A REFLEXIVE ACCOUNT OF DEVELOPING COMMUNITY HEALTH CARE MATERIAL THROUGH THE USE OF PRETESTING METHODS AND VISUAL PERSUASION TECHNIQUES

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Abstract

Fetal Alcohol Syndrome (FAS) is a congenital syndrome caused by excessive consumption of alcohol by a mother during pregnancy. It is characterized by retardation of mental development and physical growth, particularly of the skull and face of the infant. FAS is a growing problem in South Africa, with it being rife in the townships and rural areas. The lack of public information and intervention is one of the reasons why the syndrome persists in these communities and this was also the motivation for this study.

The study will be carried out in an inland town, in tandem with an NGO based within the community, which serves the people of the community. There are two sections to the methodology of this research:

The first section was the content analysis of existing health communication material. The second section was the development of test material by soliciting feedback through focus groups, which will be sampled from the community, in order to determine the variables for more effective health communication material. The researcher will work in partnership with the local NGO on this part of the methodology.

The focus groups give feedback regarding the visual and persuasive elements of the designed material, thus being incorporated into the development and design of the material. The study deals with Fetal Alcohol Syndrome as a subject and will discuss the methodology used in order to achieve the set aim of responding to the need for health communication material by developing the material in tandem with a community group. This study, once completed, will contribute to knowledge that will assist in preventing and dealing with the effects of the syndrome, and contribute to the improvement of health communication messages.
Keywords*: Visual Persuasion Techniques; Fetal Alcohol Syndrome; Health Communication*

Introduction

Fetal alcohol Syndrome (FAS) is a congenital syndrome caused by excessive consumption of alcohol by the mother during pregnancy and is characterized by retarded mental development and physical growth. This paper discusses the methodology used in order to achieve the set aim of responding to the need for health communication material by developing the material in tandem with a community group, as well as the testing of persuasion techniques in health communication material. The project deals with Fetal Alcohol Syndrome as a subject, and the methodology implemented to test graphic and visual variables that could contribute to improved preventative and treatment communication material. It is hoped that the outcome of this study will contribute to knowledge that will assist in preventing and dealing with the effects of the syndrome, as well as contribute to the body of existing knowledge regarding effective health communication material.

FAS is caused due to unborn children being exposed to alcohol prenatally. Most of the mothers of these affected children are marginalized and do not have the economic or social power to avoid or abandon their

situation (May, Brooke, Gossage, Croxford, Adnams, Jones, Robinson, & Viljoen 2000). While FAS is preventable, its effects are also incurable once it has affected an individual. FAS is preventable by total abstinence from alcohol during pregnancy. The message of total alcohol abstinence during pregnancy however, has not made its way into the consciousness of communities as yet. Toutain (2010) for example, looked at the abstinence/consumption of alcohol during pregnancy in France. The study revealed that abstinence from alcohol during pregnancy was misunderstood by participants and is often interpreted as 'cutting down' on regular amounts. Only a small minority of women refused to consume alcohol during pregnancy (Ibid 2010: 185). Toutain's research also revealed the essential role of culture around alcohol in a given society. Toutain (2010: 187) recommends that there must be a unified recommendation of alcohol abstinence during pregnancy; that awareness campaigns be implemented to counteract misconceptions concerning prenatal alcohol exposure and; to educate the public concerning prevention and safety (total abstinence).

Understanding and identifying which populations are high-risk in terms of Fetal Alcohol Spectrum Disorders (FASD), helps prevention efforts and these efforts in turn have been met with more success than a general prevention approach (Thomas et al. 2010). The high risk factors for FASD as identified by Thomas et al. (2010) are typically present in some South African Communities. These are: low socio-economic status and education; increased maternal age; number of pregnancies and poor malnutrition before or after prenatal alcohol exposure. It is not that these conditions are just present in some of South African communities; several authors even suggest that the highest prevalence of FAS occurs in wine growing areas of the Western Cape (May, Gossage, Brooke, Snell, Marais, Hendricks, Croxford, & Viljoen 2005; WHO 2011). It is for this reason that the fieldwork took place in a small town, in the Western Cape. Doing fieldwork in such a community poses its own difficulties. Cultural differences between the subjects and researcher cloud communication efforts and could weaken the effectiveness of health care communication material. Hugo (2000: 13), an advocate of cultural sensitivity in health communication material, argues that material must communicate with patients and not to them. Such material must not only be culturally sensitive and "with them" but also requires a level of self-efficacy, rather than a simple linear form of communication, to be effective (Ojo & De Lange 2011).

In attempt to make their poster communication more effective, governments and political parties often use persuasion techniques in their campaign communication, in order to solicit votes from the electorate and sway decision-making in their favour. These techniques have been effective and are varied from harsh and blatant, to more subtle and suggestive (Thomas, Warren & Hewitt 2007). Examples of this is evident in persuasive South African political communication. One example is 'Name Calling', and was used by the Independent Democrats. Their poster read "Put criminals in Jail. Not in Government". The 'criminals' they refer to are members of the African National Congress (ANC) that were in government at that time. The posters use the Name Calling technique by labeling ANC members as criminals and thus portray a negative image of the ANC to the electorate. This poster is illustrated underneath.

Figure 1. Put criminals in jail. Not in government (Independent Democrats 1999)

This paper looks at the methodology used in developing health communication material for a targeted audience, as well as pretesting the audiences response to persuasion techniques embedded within health communication material. In addition to this, the study comments on the variables that contribute to improved health communication material. This aim is achieved by discussing the techniques used during the testing phase of a series of visual communication materials, as well as the visual persuasive techniques employed in the material.

The Method

This section discusses the process of preparing test material and the technique used in the study that aimed to test the response of the audience to persuasion techniques within health material. The test material preparation was preceded by an analysis of existing FAS communication material. The field work i.e. the testing of material and development of final material, in conjunction with an NGO, took place in an inland town in the Western Cape. The name of the town and NGO may not be listed due to confidentiality reasons and agreements with participating subjects. The NGO was established for FAS prevention, education and awareness and driven by a vision of children born without FAS. The organization conveys the FAS message through an experimental learning model, aimed at young children, adults, and shebeen owners.

The analysis of existing FAS communication material

The South African Department of Health did not have material that deals with FAS at the time of enquiry, therefore the posters and graphic material used in the analysis were collected largely from the internet, using the key phrases 'Fetal Alcohol Syndrome Poster Campaigns' and 'FAS Communication Material', and from a South African NGO. 105 Posters were collected and formed the sample for analysis.

Thematic analysis

The aim of the content analysis was to identify thematic trends and persuasion techniques in existing FAS health communication material. This analysis used a similar approach to the one employed by Roberts and Pettigrew (2007) who conducted a thematic content analysis by developing codes for analysis and having the material independently viewed and coded by two separate coders. The development of themes to use within the analysis was achieved by having the researchers view the material separately, and then ascribe a thematic description to each poster. The researchers identified similar, overarching, themes throughout the body of material. A brief reflection of the main nine themes identified during the analysis is given below.

Consequence - Negative

This particular theme is characterized by the use of strong graphic imagery to communicate the consequences of an undesirable behavior or being affected by a particular ailment. Examples of such a theme are given below:

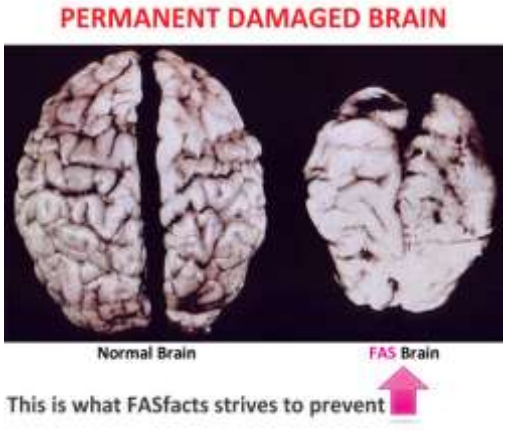

Figure 2. Permanent brain damage (FASfact 2013).

Consequence – Positive

This theme communicates the potential consequences of engaging in risky healthy behavior while also communicating the potential rewards of abstaining from such behaviors. An Example is below:

Figure 3. Thanks mom (preventfas n.d)

Prevention - Negative

Prevention-negative posters focus on the consequences of not adopting a particular health behavior. These messages typically do not contain a self-efficacy element. An example of this theme is below:

Figure 4. Avoid alcohol during pregnancy (Washington State Liquor Control Board n.d).

Prevention - Positive

This theme highlights prevention methods as well as the positive outcomes of adopting the mentioned prevention methods. Example below:

Figure 5. Fetal alcohol syndrome cured (Minnesota Prevention Resource Centre [a]).

Promotion – Negative

Characteristics of this theme are identified as a promotion of health behaviors accompanied by copy or graphic that addresses the negative impact that risky health behaviors can have. The poster below is an example of this theme:

Figure 6. Alcohol can harm your unborn baby (Russel Family Fetal Alcohol Disorders Association 2011).

Promotion - Positive

This theme promotes the positive impact or benefits of adopting or abstaining from certain health behaviors These types of messages are positive in nature, provides and outcome of the desired behavior. These posters typically contain a self-efficacy element in their communication. An Example is given below:

Figure 7. Love (FASworld Toronto 2013).

Informational – Negative

This theme is identified as awareness information provision from a corporate or governmental source highlighting the negative effects of the health subject e.g. Fetal Alcohol Syndrome. Below, is an example of a poster that utilizes this theme:

Figure 8. 40, 000 Babies (The Arc of New Jersey 2012).

Informational – Positive

This theme is identified as awareness information provision from a corporate or governmental source highlighting the promotion aspects of the health subject. An example is below:

Figure 9. My family wanted me to be as healthy as possible (Best Start Resource Centre 2001)

Informational – Neutral

This theme is identified as awareness information provision from a corporate or governmental source that has neither an explicitly positive or negative focus. An example is below:

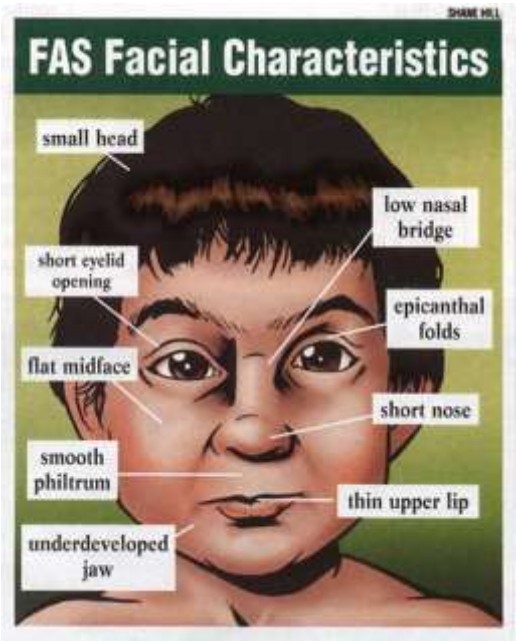

Figure 10. FAS facial characteristics (Shane Hill 2000).

Informational – Positive + Negative

This theme is identified as awareness information provision from a corporate or governmental source that highlights both negative impacts and prevention information with regards to a specific health subject. An example is below:

Figure 11. Fetal alcohol spectrum disorders (Ohio County Substance Abuse Prevention Coalition 2008).

The second component of the posters' analysis identifies persuasion techniques, taken from the literature, and seeks to identify which persuasion techniques were made use of in each poster's design.

Analysis of communication techniques

Similarly, the sample of posters was analyzed for persuasion techniques in their designs. The technique analysis was done to ascertain if any notable persuasion techniques, such as those used in political posters, were used in these items. It is also hypothesized that by including persuasion techniques in health communication material, one might increase their effectiveness. The codes used to identify the different persuasion techniques are taken from the work of Fleming (1995) and Bryder (2008). A description and example of each technique is as follows:

Name Calling

'Name Calling' is attaching a negative label to a subject to incite negativity from the audience towards that subject, whether the subject be a person, party, ideology or ethnic group (ibid.: 1995: 4). The effect of this technique is that it justifies negative/preventative behavior towards the subject.

Figure 12. Some mothers spoil (Minnesota Prevention Resource Centre[b]).

The poster uses the 'Name Calling' technique to attach a negative connotation to 'some mothers' as used in this context. The labeling of these mothers is used in order to encourage women to not be a part of this group by abstaining from alcohol while pregnant.

Plain Folk

This technique is the representation of the target audience in the communication, in a bid to win acceptance from the target audience (ibid.: 1995:9). The advantage of using this technique is that it builds a relationship with the audience, based on similarity. This relationship suggests that the propagandist has similar concerns, passions and fears to the audience and is therefore to be trusted and supported to deal with the audience's concerns as well. An example is presented below

Figure 13. Wanda never thought she'd get pregnant (Idaho Radar Center 2013).

The poster makes use of the Plain Folk technique by using a model, which is likely representative of the target audience, and makes it even more personal by giving the model in the poster a name (Wanda). The naming of the model makes the model part of the audience and could help the audience to identify themselves with the message.

Bandwagon

The 'Bandwagon' technique is used to incite group behavior and to create the impression that everybody likes members of this group. This technique also appeals to the insecurities of people and subtly suggests exclusion as a repercussion of failing to cooperate with the appeal given. An example is given below.

Figure 14. No thanks I'm pregnant (prevention institute n.d.).

The above poster depicts an image of a woman refusing a glass of wine because she is pregnant. Depicting this behavior encourages a viewer to act accord to the norm being established.

Message Simplification

This technique focuses on simplifying the message. This is a common technique used in health communication posters.

Figure 15. Cured (Minnesota Prevention Resource Centre[c]).

The poster above communicates a complex process in a simplistic manner. This technique is the core of prevention messages dealing with FAS.

With the first step of the methodology completed, which was the content analysis of existing materials, the research moved into the second phase of the methodology. The second phase was the testing of material and development of final material by way of bottom-up process, which made use of focus groups.

Testing of Material and Development of Final Material

Several authors recommend the use of focus groups when developing and pretesting health communication material (Dowse 2004, Houts, Doak, Doak, & Loscalzo 2006 & Hugo 2000). This study used such focus groups to obtain feedback for the development and the final communication material. The problems that faced the researchers in the planning stages were the differences between the intended audience and the researchers in terms of language, education and cultural orientation. The biggest obstacle was that the researchers are not the same gender as the intended interviewees and do not speak the same language. It is for these reasons, and influenced by the work by Hugo (2000), that the decision was to follow a qualitative approach and to make use of an interviewer that matched the target audience with regards to culture and gender to act as a facilitator between the subjects and the researchers.

The work of Rosaline Barbour (2005), in terms of managing focus groups, in turn guided the interaction between the focus groups, the facilitator and the researchers. She explains that homogenous focus groups provide a secure environment for participants to share their views, and that they may also express their views more openly, as participants find themselves in a naturally occurring peer group (ibid; 2005:743). The downside to using homogenous groups is that participants may feel pressured to conform to certain views that are held by peers, as opposed to expressing their own individual opinion.

The subjects and facilitator

The subjects came from a high-risk population in terms of the conditions for FAS to be prevalent. The focus groups were made up of members from an Afrikaans-speaking community that lived in the immediate peri-urban areas surrounding the main town. Subjects for the focus groups were determined by the NGO and obtained through the use of convenience quota sampling. The subjects consisted of mothers, who are part of the community, and serve as mentors to other mothers affiliated with the NGO's FAS programmes. These mentors are between the ages of 35 and about 50. The focus groups were small and ranged from 3 to 5 per focus group discussion. Interaction with the focus groups took place via a facilitator of the same gender as the subjects. The facilitator was a professional person (a social worker) employed by the NGO who acted as the interviewer and facilitator of the focus groups. The facilitator spoke the same Afrikaans dialect and shared the same cultural nuances as the subjects in the focus groups.

A university ethics committee approved the project with conditions.

Piloting the test material

The work of Houts, Doak and Loscalzo (2006) and the results of the analysis of existing FAS material influenced the development of twelve preliminary test items. Houts et al. (2006) assessed the effects of pictures on health communication through a review of peer-reviewed studies in health education, psychology, education and marketing journals. Their work sought to address the challenges of low-literate patients and identified how to make pictures most effective within health communication. Some of their recommendations are that health educators should look for ways to incorporate pictures in their health communications; pictures and photographs must be simple, and the language used with pictures should be as simple and as "straight-forward" as possible (ibid., 2006:188). The pilot process consisted of presenting twelve preliminary test items to the NGO management, and going through a review process with the facilitator and a focus group. Persuasion techniques were imbedded within some of the test material, and presented to the focus group participants alongside material that had no persuasion techniques imbedded in them; according to the studies hypothesis, the group was to be in favor of material that contained the persuasive element. An example of two of these test items are given below.

Figure 14. Ons gaan gesonde kinders he.

The above message is a promotion-positive poster that uses a bandwagon technique. The poster made use of persuasive text alongside a non-persuasive graphic.

Figure 15. Ons gaan gesonde kinders he (2).

This poster, presented alongside the one above, is also a promotion positive poster, making use of the bandwagon technique. This poster, however, makes use of both persuasive text and a persuasive graphic.

This was the only focus group session where one of the researchers was present and observed the focus group interviews. The facilitator received feedback on interview and recording techniques and how to encourage interviewees to comment on the concepts. This pilot process enabled the refinement of the focus group-facilitator interaction, the recording and communication between the facilitator of the researchers. The comments from the pilot focus group and recommendations from the NGO's management enabled several changes to the test material for two additional focus group tests.

First phase focus group

The twelve test items consisted of image-text health care messages, adapted from the twelve ideas used in the pilot test. These changes came after considering the comments from the NGO management, the facilitator and comments from the subjects during the pilot phase. The facilitator, in a relaxed atmosphere, explained the process and the purpose of the focus group. The subjects viewed the messages on separate sheets and freely commented on each item. The facilitator encouraged debate and clarified issues if a member asked a question. The subjects expressed a wide range of emotions and responded with tones of acceptance and rejection to small nuances in images and text in each poster. One example where the subjects commented on small detail is a message endorsed by Pieter de Villiers, a previous coach of the South African national rugby team. The aim of these two posters was to test the technique of Band Wagon and Plain Folk. Pieter is a well-known and

respected person in the community and the text is supposed to induce a sense of appropriate group behavior. This particular message is aimed at men, but it was informative to hear the responses of the interviewees. They made specific comments as to why the words “liefling” (darling) and “watse” (which) in the text may not be appropriate. They valued the celebrity’s personal life, his relationship with his wife, as important and even commented on small incidences about Pieter from news reports and television broadcasts. The two images of Pieter are shown underneath.

Figure 16. Pieter de Villiers

Second phase focus group testing

After receiving feedback from the focus groups in the first phase, the researcher designed a second set of posters (text only) to determine which communication style would elicit a better response from the interviewees. This involved determining the audience’s ‘regulatory focus’, which indicates whether the audience is prevention or promotion focused. These posters compared promotion to prevention messages (regulatory focus); self-efficacy to non self-efficacy; and elaborative to simplified text messages. The focus group session in this phase followed a similar process to the previous session. An example of a text-message poster is given underneath.

Figure 17. Text-message posters.

These text messages are similar except the one uses a Promotion-negative theme whist the other uses a Promotion-positive theme. Although it is not within the scope of this paper to report on the subjects' feedback, we noted that that the interviewees did not show a strong preference for one or the other, but that children and their wellbeing is of extreme importance to them.

Reflection

The advantages of focus group testing, are that the developer of the material learns early in the development process which messages will be most effective, and which are well received by the target audience (Hugo 2000). In addition to that, positive results on pretested material can also allow buy in and sponsorship from corporate organizations (National Cancer Institute n.d.). The National Cancer Institute (NCI) proposes a framework with essential steps in developing and pretesting message materials. These steps range from collection and reviewing of existing material; the development and testing with the target audience; decisions as to what include and exclude; and then the final message development. The NCI framework informed the formative process of the material development. Using focus groups from the target audience to develop health communication material can be further advocated by the fact that focus groups assist in bridging socio-cultural divides and addressing nuances that may emerge in cases where the designer is not from the socio-cultural background as the target audience. In an attempt to develop communication that is better understood, better received, and better related to lived-experience of the target audience and by this understood to be more effective, focus groups have a significant impact in the process of the development of such material.

The feedback from the participants as relating to the use of persuasion techniques in the material, especially those techniques that were concerned with textual rhetoric, suggest that persuasion techniques of rhetoric are not as important to the participants as the 'angle' (motivating idea) from which the subject (FAS) is addressed. The participants were largely concerned with ideas of a loving and stable family and healthy children, these were the variables that were highlighted from the discussions as contributing to improved health communication material. So in this case, an attempt to create material that could be more persuasive might be more successful by focusing particularly on these variables within the target audience and include visual and textual cues that speak to these priorities.

Conclusion

The high prevalence of FAS in some parts of South Africa motivated a project for effective health care communication material. Developing a message for a narrowly defined group requires the input from the target audience to ensure that the messages and graphics are culturally appropriate and are understood by the intended audience.

The development of the test material was preceded by an analysis of existing communication material. The analysis indicated that existing FAS communicators material fall into four major themes namely, fear, prevention-negative, promotion-positive, and society/family. Health communicators also use some persuasion techniques, similar to those used by political parties and governments, namely, Name Calling, Plain Folk, Bank Wagon, and the Simplification technique.

The analysis of existing FAS health care messages, an interpretation of the tape recordings of the three focus group sessions and post hoc discussions with the facilitator led to the following conclusions:

Socio-cultural issues play a major role in health communication, and must form the emotional anchor for health care communication messages.

A formative approach with pre-testing is mandatory if one needs to develop health care messages that require behavioral change.

A targeted message requires a targeted researcher (facilitator) to interact with a sample from the target population.
This paper recommends the use of persuasion techniques within health care material, although recognizing that the employment of such techniques will not be a panacea to communication improvement. Additionally recommended, is the employment of an appropriate interviewer to facilitate focus group session when pre-testing health care communication material that requires feedback from a target audience. The researcher or facilitator in this process must:

- not only be from the same socio-cultural group as the sample selected for pre-testing the material, but must also:
- be socially accepted by the interviewees;
- share the same values and emotional connectedness as the interviewees;
- be seen as an equal and not as a person in a position of power and furthermore;
- must be objective and be able to focus interviewees to the task at hand.

Health care communication materials require more than pre-testing and cultural sensitivity (Hugo 2000), it also needs a sensitive and culturally matched facilitator (researcher) that they can relate to, and be accepted by subjects during a pre-testing phase.

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IDEALISATION AS A DESIGN APPROACH IN ENAMELLED CONTEMPORARY JEWELLERY

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Abstract

The Platonic notion of idealism, specifically used in the botanical imagery represented in Renaissance paintings is investigated in this paper and compared to the botanical motifs used in Renaissance enamelled jewellery. The same process of idealisation used in Renaissance painting and enamel jewels is applied to South African botanical motifs, which creates a stylistic departure from the botanical images used during the Renaissance.

It can be postulated that Plato's theory on the thrice removed reality can be applied to the jewellery designer where nature (the form) was imitated as an ideal image by Renaissance painters (first representation). The idealised images from these paintings or drawings were then further interpreted by Renaissance jewellery designers and applied as even more stylised motifs in the jewels (second representation) due to the even further idealisation of the original form. Hence, subjects and objects became 'idealised' through the conversion of a philosophical principle into an artistic style. Thus, in the artistic or design approach of idealism, artworks became representations of the ideal form which were created through the process of perception and recollection.

The approach in this research is threefold. Firstly, a literary review is conducted on the thought and theory of idealism and its link with Renaissance painting and enamelled jewellery. This literature review contextualises the idealisation of botanical motifs, enamelling techniques and colours employed on Renaissance jewellery. Secondly, images and information on selected Renaissance paintings and enamelled jewellery incorporating botanical motifs are compared and analysed in order to investigate the progression of the idealised motif. Such pieces are interpreted, processed and the overall designs in each category stylistically analysed. Through the analysis of the pieces in terms of design format, enamelling techniques, enamelling types and colours used, the basic design model that was employed in the designing of the piece becomes apparent. The enamelling techniques, types, colours and motifs are re-applied using the notion of idealisation, to South African botanical motifs and a design is constructed for contemporary enamel jewellery.

Lastly, although enamel is chosen as the medium in this case study it can be substituted with other mediums employed in contemporary jewellery.

Results from the design framework are practically applied through the designing and manufacturing of contemporary jewellery using enamel as a medium. The botanical motifs used in the contemporary jewellery would thus represent the idealised image of the South African botanical example, which would be based on the idealised botanical images of Renaissance jewellery. Hence, the motifs would be thrice removed from the 'truth', which is aligned with Plato's theory on idealism. This would show the application of an historical design principle to contemporary design.

Historical fine art concepts can thus be applied and used as a design approach in contemporary jewellery design and, as a result, a contemporary enamel range of jewellery is created, translated from the Renaissance idealised botanical motifs into a South African context.

Keywords*: Idealisation, Renaissance, enamelled contemporary jewellery.*

Introduction

This paper is based on current research which proposes to create contemporary enamel jewellery using idealisation as a design approach. The Renaissance, a cultural movement originating in Italy and spreading to other European countries such as France, England, Spain and the Low Countries (a period ranging from 1150 to 1580) forms the historical context of the study because of the inclusion of botanical motifs in both forms of art and the extensive use of enamel in Renaissance jewellery design.

Enamel, the material used to introduce colour to the contemporary pieces, is coloured glass which is fused onto a metal base at a high temperature (Clark, Feher & Feher 1967, p. 8). This coloured glass, or enamel, consists of a clear flux and metal oxides, which not only introduce colour to the flux, but also determine the degree of translucency of the specific enamel once fused. The idealised representation of botanical images in Renaissance jewellery, which relates to the Renaissance paintings, was enhanced through the use of enamel, and thus is chosen to retain the historical context in terms of the colour and techniques used during the Renaissance.

The aim of this paper is achieved through focusing on individuated design, which is facilitated by the development of a design framework and practically applied to create contemporary jewellery pieces. A further objective of this paper would be to investigate how idealised botanical motifs, discernible in Renaissance jewellery, can aid in the design of contemporary enamel jewellery. As a result, this would also address the problem of creating contemporary designs within a South African context and with a unique South African identity.

Definition of 'idealism'

Although the concepts of 'idealism', 'idealise' and 'idealisation' are related, they are by no means the same. Idealism is defined by Blackburn (2008, p. 177) as a philosophical doctrine where reality is fundamentally mental in nature. Although many forms of idealism exist, the most common manifestation of idealism is the creation of a world through the employment of mind-dependant linguistics and social categories. The dichotomy of idealism lies within this definition, as we do not 'create' worlds, but find ourselves in one. Furthermore, Little (2002, p. 1310) defines idealism from a philosophical stance as 'any of various systems of thought in which the object of external perception is held to consist of ideas not resulting from any unperceived material substance'. This definition could relate to the artistic or design approach of idealism where artworks became representations of the ideal form which were created through the process of perception and recollection.

The study mainly refers to Plato's interpretation of idealism, specifically focusing on his dialogues in Book X of *The Republic*. In this, Plato discusses his ideal state and, subject to that, the role that the arts (specifically poetry and painting) should play in these idealised circumstances. Plato (1974, pp. 336-339) describes the work of artists as mere representations of objects (the reality) and explains that a work of art is a copy of a copy of a form (three time removed from reality), thus creating an illusion or an ideal form that does not exist. Plato concludes that the artist knows little or nothing about the subjects that he represents and that the art of representation holds no serious value. However, despite these critiques from Plato, Classic Greek artists used idealism as a guide in the creation of their artworks.

Idealisation as a design approach during the Renaissance

In contrast to the largely theological studies of the mediaeval times, the Renaissance was based on an avid study of the classical works of Greece and Rome. This attempt to re-establish both classical thinking and arts

into a culture in its own right became known as 'humanism'. 'Humanism' is defined by Blackburn (2008, p. 171) as the renewed study of liberal Greek and Roman studies (which included grammar, rhetoric, history, poetry and moral philosophy), a harmonious unity of humans and nature and a renewed celebration of the pleasures of life. Central to humanism was the new concern with man and his world and, unlike mediaeval art, man became worthy of representation and featured in sculptures, paintings and even jewellery alongside religious and mythological motifs and imagery.

Humanism was the catalyst for the pursuit of the ideal form. Artists, adopting the classic works from the Greeks and Romans, ignored the flaws found in nature and sought to replicate nature in its most ideal and perfect form. Alberti (1966, p. 94) explains in his treatise on painting, *Della pittura,* that painters should 'always take from nature that which you wish to paint, and always choose the most beautiful'. Consequently the Renaissance artists, much like the Classic artists, chose to represent art as nature in its most ideal form. This representation of a person or thing in an ideal form and an ideal state of perfection is defined as 'idealisation', which refers to the action of idealising (Little, 2002, p. 1310).

Idealisation resulted in eliminating all extraneous accessories and concentrating only on the essential qualities of the subjects or objects, which were perfected or embellished. This approach is also supported by the Renaissance painter and historian, Giorgio Vasari (1912) who insisted that true Renaissance art consisted of the imitation and improvement of nature according to the Platonic Idea. Consequently subjects and objects became 'idealised' through the conversion of the philosophical principle into an artistic style. Berenson (1968, p. 21) notes that the Renaissance painter strove towards the naturalistic reproduction of objects but, due to humanistic principles, objects were presented in their ideal state. The Renaissance painter thus portrayed images as they ideally should be and tried to transcend the physical limitations of the object by omitting defects and perfecting undesirable features.

Idealisation as a design approach in contemporary jewellery

The notion of using idealisation as a design approach in contemporary jewellery is justified as there are various ways to initiate design in contemporary jewellery. Broadhead (cited in Grant 2005, p. 25) suggests that ideas in contemporary jewellery design have inevitably converged with those originating from other disciplines, notably fine art. Apart from fine art, designs could also be inspired by nature, techniques of the industrial world, personal imagery and symbolic expressions, could comment on aspects of contemporary life or could simply be concerned with composition and form.

Another contemporary design approach is to revert to history as a means of inspiration. The designer is then confronted with applying the historical content within the conformations of a contemporary movement and to challenge the boundaries of traditional jewellery. Conversely, contemporary jewellery designers may choose to emulate historical materials, designs and techniques, but could interpret these aspects within a contemporary context. This paper would clarify this approach by applying both historical materials (enamel) and a design framework (based on idealisation) to contemporary jewellery design.

Methodology

According to Goddard and Mellville (1996, p. 8) this study can be seen as creative research since a new design framework is developed which includes both practical and theoretical research. As the outcomes of the framework are subjective and conceptual, qualitative research methods are applied. In order to develop a design framework that would be inclusive of all the characteristics pertaining to the Renaissance (specifically idealisation), it is important for sufficient research and images to be analysed for valid sampling and to capture the essence of the Renaissance enamelled pieces.

This study also focuses on applied research, where the research was initiated to solve a problem with a practical outcome (the developing of a design framework for contemporary jewellery based on the notion of idealisation). Through the construction of the design framework, it is imperative that a constant comparison between the collected data and the outcome (framework) be maintained for an optimum result.

The following steps are applied in the research methodology:

- A literary review is conducted where idealism and its link with Renaissance painting and enamelled jewellery is investigated.
- Images and information about appropriate Renaissance paintings and enamelled jewellery incorporating botanical motifs are compared and analysed in order to investigate the development of the idealised motif.
- The information gained from the analyses, specifically the enamelling techniques, types, colours and idealisation of motifs, are re-applied to South African botanical motifs and a design is constructed for contemporary enamel jewellery.

Classification of Renaissance painting and enamel jewels

As the enamelled jewels need to be compared with the painted counterpart of the specific period, it is important to note the development of the botanical motifs with the advent and demise of the Renaissance. A chronological classification would demonstrate how Renaissance jewellery was influenced by painting and give a clearer indication of the idealisation process of the botanical motifs in Renaissance jewels from Renaissance paintings. To create coherent and comparative analyses of Renaissance painting and jewellery, the Renaissance is classified into four eras which include the proto-Renaissance (1150 to 1400), Early Renaissance (1400 to 1480), High Renaissance (1480 to 1525) and Late Renaissance, also known as Mannerism (1520 to 1580). Although all four periods are dealt with in the research, only the proto-Renaissance will be covered in this paper due to the length restriction.

Sufficient images and illustrations of paintings and jewellery pieces are essential in this part of the research methodology in order to justify the results. In each of the four chronological eras, a painting (first representation) which includes botanical images that encompass the main characteristics of the specific period, is analysed. The botanical images are further analysed within the context of idealisation and compared to botanical motifs applied in enamelled jewellery. Through these analyses, it would become clear whether the idealised images from these paintings or drawings were then further used by Renaissance jewellery designers and applied as even more stylised motifs in the jewels (second representation) due to the even further idealisation of the original form.

Comparison and analyses of a proto-Renaissance painting and enamel jewel

Although the International Gothic Style lasted until the sixteenth century in certain European countries, a new style started to emerge in Italy in the late thirteenth century. Panofsky (1944, p. 213) classified this period as 'proto-Renaissance' to indicate the departure from the International Gothic Style. This study affiliates with Panofsky's system of chronological classification as it firstly, indicates the re-emergence of a higher culture that was unknown in the preceding period, and, secondly, denotes the rebirth of classical antiquity (Panofsky, 1944, pp. 202-203).

The painting, seen in figure 1, called *The Annunciation,* forms part of the Maestà Predella Panels and was painted by Duccio di Buoninsegna (*c.* 1255–1318) between 1307/8 and 1311. The panel contains gold and *tempera* on wood, measures 44.5 cm by 45.8 cm and is currently on display at The National Gallery in London

(*Duccio* n.d.). This painting demonstrates the development of the figural shape, as well as the strong idealisation of botanical images indicative of proto-Renaissance paintings.

Figure 1: *The Annunciation* panel from the Maestà altarpieces by Duccio di Buoninsegna, gold and *tempera* on wood, painted between 1307/8 and 1311, 44.5cm by 45.8cm, The National Gallery, London (*Duccio* n.d.).

Berenson (1967) and Wundram (1988) comment on the religious subject matter, the bright heraldic blue and red colours of the Virgin's clothing and the use of gold leaf in the background of the painting, which is suggestive of the lingering International Gothic Style present in most proto-Renaissance paintings. However, the garments' drapery and folds indicate the abandonment of the International Gothic Style and a movement towards a more realistic representation initiated by the proto-Renaissance artists (Berenson 1967). The darker, more pronounced colours of the Virgin's garments, as well as her placement in the composition, makes her the focal point of the painting. The white architectural frames surrounding the Virgin also allude to her virginity and further enhance the figure as the focal point. Arguably, the small urn, close to the bottom of the painting, can be seen as a second focal point of the painting due to its scale and the emphasis through isolation.

The urn between Gabriel and the Virgin holds white lilies (seen in figure 2), which symbolise the Virgin's purity (Haig 1913, pp. 41-62). Unlike the figures in *The Annunciation,* the lilies are not painted naturalistically and show a strong stylisation of shape, even alluding to the French stylised *fleur-de-lis* motif. Although the botanical features of the lilies remain identifiable (such as the basic shape and colour), various details were omitted. In contrasting to the detailed rendition of figures, the lilies, although painted in various stages of flowering, are devoid of leaves or any natural flaws. The lilies are also painted using a single colour and lacks any tonal values which could render a more realistic and three-dimensional shape. It can thus be assumed that Duccio painted the lilies as visualised in his mind, as the images remain highly stylised. This conforms to the Platonic stance on idealism where the work of an artist is a representation of reality (*viz* the lilies), and so an illusion or an ideal form is created that does not exist.

Figure 2: Detail of *The Annunciation* showing the urn with lilies (*Duccio* n.d.).

From the analysis, the difference in execution between the figures and the botanical content is evident. Although naturalism (through the use of colour and technique) is applied to the figures, the botanical content still remains highly idealised. As painting was considered the height of expression during this period, other applied arts, including jewellery design, followed the approach set by the fine artists.

The following jewellery piece was chosen as it exhibited the most salient features of proto-Renaissance enamelling. The botanical motifs used in the jewellery piece is, firstly, discussed and analysed within the proto-Renaissance features and, secondly, compared to the proto-Renaissance painting equivalent. By comparing the botanical motifs in both the proto-Renaissance painting and enamelled jewel, it can be gauged whether Plato's theory on idealism is adopted and whether a copy (enamelled jewel) of a copy (painting) of the botanical object is produced.

The enamelled jewel, seen in figure 3, is a pendant diptych of St. Catherine and St. Agnes. The pendant, manufactured in *c.*1370 -1380, contains silver gilt and is French in origin. The *champlevé* enamelling technique, where opaque or transparent enamels are fired into etched or carved surfaces, is employed in this pendant, as well as *basse taille* - a technique where transparent enamels are fused over an engraved, carved or chased metal surface. The pendant has a length of 5.8cm, an open diameter of 7.8cm and is currently housed at the Victoria and Albert Museum in London (Lightbrown 1992, p. 503).

Figure 3: The opened view of the devotional pendant diptych of St. Catherine and St. Agnes (manufacturer unknown), silver gilt and enamel incorporating *champlevé* and *basse taille* techniques, Flemish or English origin, *c.*1380, length of 5.8cm and opened diameter of 7.8cm, Victoria and Albert Museum (Campbell 2009, p. 83).

Elements, reminiscent of the International Gothic Style, are visible when analysing the diptych pendant. This is evident through the diptych format, the religious subject matter, as well as the employment of heraldic colours and gilt on the silver pendant (Evans 1953; Phillips 1996; Campbell 2009). Also characteristic of the International Gothic Style is the inappropriate scale of the figures and lamb, that tower above the trees. Comparable to proto-Renaissance painting, the figures of both saints are the focus of each plaque and, due to the hatched background; perspective and depth are omitted from the design.

Furthermore, when referring to the drapery of the garments, it is clear that similarities exist between the approach of the proto-Renaissance painters and the goldsmiths. The figures of the saints appear static in translation and no attempt is made to render more realistic expressions or features. The detail and effort to realistically depict the folds in the garments are indicative of proto-Renaissance painting and the pursuit to a more realistic representation. However, the influence of the linear Byzantine enamelling style cannot be discarded when analysing proto-Renaissance enamelling. The more linear approach, specifically applied to portray the palm, lamb, crown and trees of the plaques, is indicative of the Byzantine style as most detail is omitted (unlike the drapery of the garments) and only the essentials lines are used to identify the specific motif (Lightbrown 1992, p. 503). So, it can thus be argued that both fine art, in terms of painting approaches, as well as the linear Byzantine style are adopted and incorporated by the proto-Renaissance goldsmiths.

When analysing the botanical enamelled motifs of the pendant (seen in figure 4), the linear Byzantine style, adopted by the mediaeval goldsmiths, is evident. The ‘trees’, as noted by Lightbrown (1992, P. 503), are generic in design and devoid of any identifiable characteristics. Although difficult to distinguish from a picture, the technique of *champlevé* seems to be employed in the creation of the motif, where depressions are gauged from the metal and filled with the enamel. Single colours of transparent enamels are used which are devoid of any tonal values. This use of singular colours further accentuates the two dimensionality of the botanical motif.

Figure 4: Enlarged versions of the three trees depicted in the pendant diptych of St. Catherine and St. Agnes (Campbell 2009, p. 83).

The trees consist of stylised lines whose shapes are all uniform in shape and size, creating a very flat impression of the motif. The leaves of the trees are also uniform in shape and size and a generic marquise shape was used to emulate the leaves. The trunks and leaves are also, similar to the proto-Renaissance painted botanical motifs, devoid of any natural flaws, and unlike the garments of the saints, no effort is made to portray the trees more naturalistically.

The Platonic notion of idealism can be observed in the botanical motifs of the pendant as non-specific shapes and colours are applied to create idealised versions of trees. Through the analysis, it is also evident that the botanical motifs, applied in the enamel jewel, are far more idealised than the painted counterpart and thus shows the progression of idealism, as described by Plato.

Both the proto-Renaissance painted botanical motifs and the enamelled botanical motifs are characterised by highly stylised shapes. Although proto-Renaissance painting started incorporating more identifiable features, the proto-Renaissance goldsmith reverted more to the mediaeval tradition of adopting the Byzantine style as a point of reference and created a more idealised botanical motif when compared to the painted counterpart.

The application of idealisation as a design approach to contemporary enamel jewellery

From the analyses of the proto-Renaissance painting and enamel jewels, the most salient features regarding the idealised botanical motifs become apparent which would facilitate the development of a design framework. The use of a framework in the design process is justified by Chase (1915, p.11) who asserts that it will govern and facilitate the use of motifs through a process of careful consideration. In addition, the framework would also illustrate the progressive steps of idealisation where a copy of a copy of a copy is created.

To summarise, the following steps are used in the framework:

- Firstly, the botanical motifs, observed in the enamel jewels of each chronological category, are, where possible, identified. A list is compiled of the most characteristic design and enamelling features of the botanical motifs, which includes the enamelling technique, enamel type and enamel colours employed.

- Secondly, South African botanical images are selected and the characteristics of the idealised Renaissance motifs are applied. The same stylised features are adopted, as well as the enamel technique, type and colour.

To clarify this process, the proto-Renaissance enamel jewel is used as an example and to showcase the design process based on the framework.

From the analysis of the proto-Renaissance botanical motifs, the following salient characteristic are identified regarding the features of the botanical motifs and the enamel techniques, enamel type and colours employed:

- The botanical shape is generic and highly stylised.
- Only the most prominent features of the botanical motif are relayed.
- The leaves and other botanical contents remain highly idealised as they are uniform in shape and size.
- Mainly *cloisonné, basse taille* and *champlevé* techniques are applied in most proto-Renaissance enamelled jewels, creating very flat designs.
- Both opaque and transparent enamels are applied in the same enamel jewel.
- Singular colours are applied with no attempt to create variations of tonal values, rendering the enamelled jewel two-dimensional.
- Only the most salient colours are used to represent the botanical motif.
- The colours employed are very bright, indicative of proto-Renaissance painting's influence.

These characteristics were used as guidance in the design process and incorporated in the *Daisy Pendants Range,* seen in figure 5. As indicated by the title, the pendants are based on the *Asteraceae* (daisy*)* family and were manufactured from sterling silver and *cloisonné* opaque enamel. The twelve pendants are 40mm long, with widths of 11mm, 20mm and 35mm. The backs of the pendants are set with partridge wood.

Figure 5: *Daisy Pendants Range* by author, hand fabricated from sterling silver and opaque enamels, *cloisonné* technique, length of 40mm and variant widths of 11mm, 20mm and 35mm (Photograph by Valentina Nicol).

As dictated by the design framework, various forms of daisy flowers were idealised and represented in their most basic form. Similar to the proto-Renaissance approach regarding idealism, the flower was highly stylised to the most essential lines. As with the proto-Renaissance example, the high idealisation resulted in a generic botanical motif as all identifiable traits were eliminated from the design.

The shape of the pendants is also suggestive of the proto-Renaissance as a similar diptych shape, as previously seen in figure 3, was applied. The *cloisonné* technique was chosen as it lends itself well to replicate highly stylised motifs. This technique also alludes to the Byzantine influence evident in many proto-Renaissance enamel pieces and also creates the flatness as dictated by the design framework.

Only single, bold colours were employed in each *cloison.* The choice of colours were further dictated by the specific daisy, but still remain very generic in its use. Similar to the proto-Renaissance painting and enamel jewel, no attempt was made to create a graduation of colour or a three-dimensional effect.

Conclusion

This paper shows how idealisation can be used as a design approach in contemporary enamel jewellery. The botanical motifs used in the contemporary jewellery represents the idealised image of a South African botanical example, which is derived from a design framework based on the analyses of Renaissance paintings and enamel jewels.

The idealisation of botanical motifs creates a continuous design link between Renaissance painting, Renaissance enamel jewellery and contemporary enamel jewellery. When the botanical enamel motifs are compared to the painted botanical images, the different approaches to idealism in painting and jewellery design becomes apparent. It can be postulated that the Renaissance jewellery designer designed pieces using the ideal forms of the botanical images, as they were visualised in the mind. It may then be assumed that Plato's theory on the thrice removed reality can be applied to the jewellery designer where nature (the form) was imitated as an ideal image by the Renaissance painters (first representation). The idealised images from these paintings were then further appropriated by the Renaissance jewellery designers and applied as even more stylised motifs in the jewels (second representation) due to the even further idealisation of the original form.

An interesting aspect of this approach is that, although historical and traditional in inspiration, the final pieces are contemporary and arguably original, suggesting that originality can be achieved *via* historical research and through a design process. However, the use of a design framework could be somewhat formulaic or restrictive which could impede a spontaneous creative thought process.

The outcome of the research is thus twofold; firstly this research investigates how historical fine art concepts can be applied and used as a design approach in contemporary jewellery design and, secondly, as a result, a contemporary enamel range of jewellery is created, translated from the Renaissance idealised botanical motifs into a South African context. This suggests that a defined design framework in theory, can lead to a design approach that in practice, can result in unique contemporary designs.

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A CUSTOMISED SIZE CHART FOR THE AFRICAN PEAR-SHAPED PLUS-SIZE SOUTH AFRICAN WOMEN

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Abstract

During the past decade, all the surveys of women's sizes and measurements show that a significant proportion of the population can be categorised as plus-size. This is not necessarily something new but rather re-confirms that there is a large market for the plus-size garment of all types. Younger women are becoming plus-size, particularly among "pear-shaped" South African women of African origin. These two factors, combined with the ever growing fashion awareness among the general public, make it necessary to develop a sizing chart for the pear-shaped body characteristics and to re-evaluate the existing sizing chart in relation to this particular body shape and size category. This study utilises a judgemental sample selection method and quantitative data collection methods. The units of analysis for the study are visually identified for the plus-size pear-shaped South African female of African origin, between the ages of 25 and 55. This study was carried out in the Tshwane Metropolitan region, covering Pretoria Central and Pretoria East. A total of 50 women in a 16-24 size range were selected for the study. Bust measurements of the pear-shaped women were used to estimate different size ranges of the participants. Selected body dimensions were taken using an anthropometric tape measure for the purposes of developing a customised size chart for this group. The outcome of the measurements indicate that the body measurements presented currently in size charts differ significantly from the customised size chart for the African pear-shaped woman, suggesting the need to develop a size chart that caters for this shape.

Keywords*: Chart development, pear-shaped, South African women*

Introduction

Clothes essentially provide body protection and covering, but there are other social and emotional aspects attached to them. For instance, clothes need to have a proper fit and at the same time be fashionable and aesthetically pleasing to the eye (Nkabule, 2010:1). Over the years, women's shapes and sizes have undergone changes, while the size chart used by the apparel industry remains the same (Nkabule, 2010:1). Notwithstanding the changes and differences of women's sizes and shapes, well-fitting garments remains an important requirement to consumer selection (Strydom and De Klerk, 2006:80-89). Unfortunately, most women with a plus-size figure, particularly those with a pear-shape get frustrated with clothing sizes sold in retail outlets (Zwane & Magagula, 2006:283). Mass produced garments are designed using a standard size chart that does not cater for shapes that are un-proportional.

Various factors contribute to consumer's clothing fit; these include: comfort, aesthetics, and personal choice (Pisut & Connell, 2006:368; Zwane & Magagula, 2006:283). The standard measurements approved by most standard bodies such as ASTM and ISO are only useful in the United Kingdom and the United States of America, but are not applicable to all population segments particularly in Southern Africa, where the African pear-shape is prevalent (Zwane & Magagula 2006:285). Sizing standards developers have overlooked the sizing and clothing needs of the African pear-shaped figure group with the impression that the group with a pear-shape fall within a small percentage of the population. Furthermore, national surveys have been carried

out in developed countries where size charts have been developed. Southern Africa and South Africa more particularly lacks an anthropometric database and a sizing system. The local industry has continually adapted foreign systems for use, although these have proved inadequate in addressing the fitment issues experienced by many South African women.

According to Mastamet-Mason (2008:1) lifestyle, cultural influences, age, body shape, and current fashion trends sway personal fitment preferences, and changes in these fundamentals may result in changes in personal fitment choices. Ashdown and Loker (2004:2-3) report that 50% of women in the USA cannot find garments that fit satisfactorily. An estimated 35% of garments purchased from catalogues in the USA are returned because of dissatisfaction with how they fit (Ashdown & Loker, 2004:2-3). To date, no research has been carried out in South Africa to establish garment markdowns, even though it can be assumed that clothing markdowns and returns in South African retail stores such as Edgars, Woolworths and Truworths can be associated with problems of ill-fitting garments. According to Strydom and De Klerk (2006:80-89), garment manufacturers attempt to supply well-fitting garments based on the current sizing system but problems of fit still persist. The mass produced garments are created by increasing and decreasing a model size garment that fits the sample sized model (Bye, et al., 2008:79). The market place is filled with people whose body shape and measurements do not necessarily follow any linear relationship (Bye, et al., 2008:79) as suggested in size charts that guide pattern grading practices. Current size charts and pattern grading practices do not accurately reflect body measurements across varied sizes and body shapes, suggesting that problems of fit are attributed by unrepresentative existing size charts and the assumption that all body shapes and measurements have some form of linear relationship between one size/shape and the next size.

The pear body shape is defined as a silhouette in which the hipline area and upper thigh region are much fuller than that of hourglass silhouette but the upper torso/bust area is smaller than the hourglass silhouette with narrow shoulders (Armstrong, 1995). Ellis (2008:210), Nkabule (2010:2), Zwane and Magagula, (2006:283-287) observe that pear-shaped bodies are more prevalent among Southern African women of African origin. In preliminary findings of an ongoing study, Makhanya reports that “59.26% of South African female students of African descent have a triangular (pear) body shape”. About 60% of the population with pear body shape warrants marketing attention. furthermore, Manuel (2000:46) confirms that pear-shaped participants are dissatisfied with their upper or lower bodies because of tight fit they encounter with garments around the hips and thigh areas, loose fit encountered at the waist, neck, and armholes (Manuel 2000:46). Pear-shaped women are forced to purchase a loosely fitting ready-to-wear garment, but have to incur the additional cost of adjusting the garment before being able to wear it. Alternatively, they are forced to buy different sizes of the same style and colour for the top and bottom garments, because there are no suits, or coordinates sized according to their shape (Zwane & Magagula, 2006:283-287).

Although literature exists about the pear-shape, it is imperative to note that African pear-shape differs significantly from the western pear-shape. The western pear body shape is characterised by hips which are 8cm larger than the bust (Simmons, Istook & Devarajan, 2004:1-15), while the African pear-shape is 30cm larger than the bust (Mastamet-Mason, 2012). The female body shape of black women in South Africa, according to Chatterjea (2004:185) can be connected to Saartjie Baartman, of 19th century (Figure 1), whose lower torso was disproportionately larger than her upper torso. In spite of exaggerated body features, one’s body structure cannot change and cannot be forced to fit into ideals of other cultures, just because some cultures feel they are superior. It is important that fashion designers take cognisance of diverse shapes and provide clothing appropriate for their customers. No human being has control over their body shape, and no one should be compelled to hate her own body because it does not comply with the western figure. All body configurations have a right to be properly dressed in well-fitting clothing.

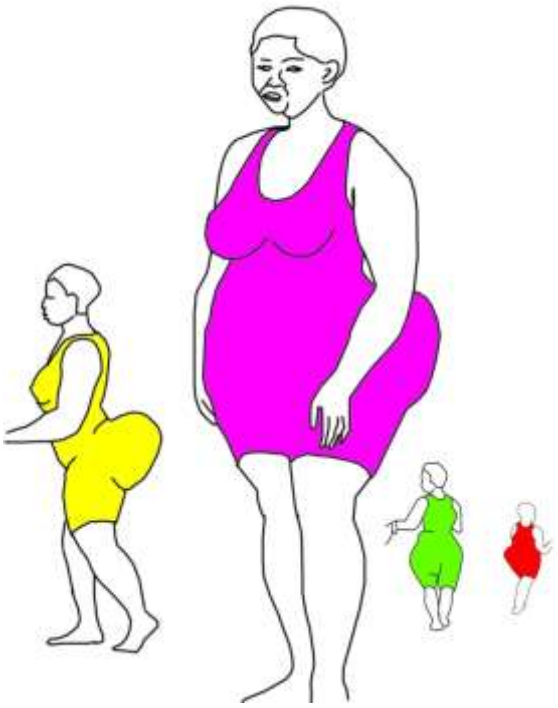

Figure 1: **Saartjie Baartman, of 19th century (Adapted from: Pamela Scully and Clifton Crais (2008:304)**

Literature Review

Plus-size women are appearing at a younger age, particularly among "pear-shaped" South African women of African origin (Nkabule, 2010:1; Zwane & Magagula, 2006:287). These two factors, combined with the ever growing fashion awareness of the general public, make it necessary to develop a customised size chart for the pear-shaped body characteristics and to re-evaluate the existing sizing chart in relation to this particular body shape and size category. Contemporary sizing systems are not only inadequate at providing African women with acceptable quality of fit but are also general and not specific to the pear-shaped plus-size women (Mastamet-Mason, 2008:204; Zwane & Magagula, 2006:287). This section discusses the root causes of fitment problems, which a body type or characteristics play a vital role in attaining well fitted clothing.

Body shapes

Women have a greater variation in body shape as compared to men. Their body shapes tend to be classified based on visual evaluation and the ratios between their key dimensions (Bougourd, 2007:120; Le Pechoux & Ghosh, 2002:4). Five prevalent body shapes comprising the hourglass (Figure 8), the pear (triangular), the barrel (inverted triangle), the apple (rounded) and the rectangular (straight) body shape, have been identified and discussed by many researchers (Connell *et al*., 2006:88). These female body shapes are also common among South African women of all ethnicities; however, the pear-shape is the most prevalent type, yet clothing retailers in South Africa continue to sell apparel designed for the standard figure. As pointed out in the introduction, the South African pear-shape is a body shape much wider at the hip than at the upper torso (bust and shoulder) with an indented waist. This body shape appears extremely heavy in the hip area relative to waist and shoulder, with much fuller and rounded breasts, unlike the western pear-shape. Women with such an exaggerated hipline experience fitment problems when purchasing a pair of pants, skirts and even dresses which are based on standard measurements of a well-proportioned figure. The differences between

the ideal body shape, the western pear-shape and the South African pear-shape, point out the obvious implications of ill-fitting garments as illustrated in Figure 2.

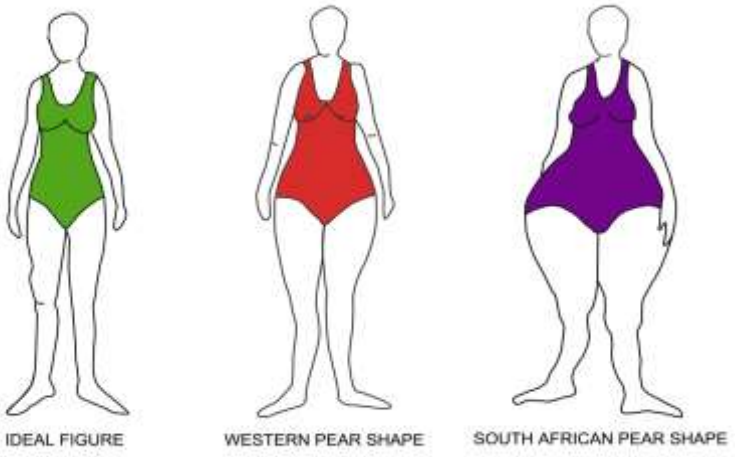

Figure 2:Illustration by Afolayan, 2012.

Size charts

A size chart is the "artificial division of a range of measurements" (Beazley, 1998:67). The number of sizes within this range is usually aimed at being both convenient for wholesale production and also satisfy the customer's requirements. The intention is to provide clothing that can fit a maximum number of people with the minimum number of sizes. It is therefore advantageous to both manufacturers and retailers to have size charts that are brief and reasonably economical in terms of sizes and simplicity in reading and use (Kunick 1984). This, however, is reasonable in a country where the majority of the population have minimal body deviation from the idealised body shape. It may be argued that such size charts would be easily adapted for rectangular and hourglass body shapes, since the waistline region of a basic pattern will only require enlarging or reduction for the rectangular the hourglass body shapes respectively. The other body parts in a pattern will remain unadjusted making it easier to adapt. In a country where the majority of the population have exaggerated hips and thighs and narrow shoulders, as is the case of South African women, the pattern adaptation would be complex and hence the need to understand the shape well in advance to facilitate a customised size chart specific to the unique shape displayed.

Methodology

This study employs both quantitative and qualitative research approaches although; the quantitative method outweighs the qualitative method. Anthropometric data from 50 visually identified pear-shaped South African women of African descent in a 16-24 size range were selected for the research, from Pretoria. Bust measurements of the pear-shaped women were used to estimate the women's sizes. A total of 15 measurements were recorded for each subject. The measurements included 4 linear (nape to waist, shoulder to bust, shoulder to waist, and waist to hip) and 11 girth measurements (shoulder, across shoulder, chest, bust, back width, waist, upper hip, lower hip, upper arm and thigh. Statistical analysis of anthropometric data conducted were done using a spreadsheet (Microsoft Excel 2007©) where mean, median and mode for the measurements were calculated. Univariate analyses of the dataset were carried out with the purpose of developing a customised size chart for the African plus-size pear-shaped woman. Calculation of the mean was done in three stages: (1) multiplication of each measurement by the number of subjects of the same size, (2) the result of all multiplications are totalled, and (3) divided by the total number of subjects.

Results and Discussion

The results and discussions are given according to aims of this research. The aim of this study was to develop a size chart for the South African pear-shaped full figured women of African origin. Before different size ranges were developed, it was important to calculate the means, mode and median values to facilitate easy development of the size ranges of the participants, and to provide a clear understanding of the relationships existing between the measurements of the obtained size ranges. Table 1 presents analysed body measurements into size ranges.

Table 1: Size ranges for the 50 participants of this study

SIZE /KEY MEASUREMENT	Size	Size	Size	Size	Size
UPPER TOSO	16	18	20	22	24
CSC-Shoulder	12	14	13	13	13
CSC-Across Shoulder	37	40	41	43	43
CSC-Nape to Waist	41	42	43	43	42
CSC-Upper arm	36	34	37	40	39
CSC-Chest	40	42	44	45	43
CSC-back width	41	43	46	47	51
CSC-Bust	103	107	112	121	128
CSC-Under Bust	87	93	96	103	104
CSC-Waist	85	92	94	103	107
CSC-Shoulder to waist	44	47	46	48	48
CSC-Shoulder to bust	30	34	36	42	34
LOWER TOSO					
CSC-Hip	127	143	147	153	162
CSC-Waist to Hip	29	25	26	26	43
CSC-Hip bulge	131	146	149	152	168
CSC-Thigh	78	85	84	90	92

From **Table 1**, it is clear that most body measurements of the upper torso and across the different size ranges are different, with a range from 1cm to 9 cm. This may suggest that it is possible to standardize body measurements of the upper torso, if these numbers are reflected in a larger population. It is worth noting that hip and hip bulge measurements differ significantly from one size range to the next, with a range from 4 cm to 13 cm and 3cm to 15 cm respectively. However, some size ranges as in the case of sizes 18 and 20 shows a difference. These inconsistent differences may highlight the complexities of coming up with standardized size charts for such a body type. However, this being a pilot study and only utilising a few measurements and a manual method of taking body measurements, the results may prove otherwise if a larger population was studied with the use of modern technologies such as a three-dimensional body scanner.

In order to understand the underlying factors for fitment problems experienced by pear-shaped women, an attempt was made to compare the existing chart, assumed to be used in the industry, and the size chart developed for this study. Results are shown in Table 2. All the taken measurements in the developed (customised) size chart were compared with the measurements on the standard size chart.

Table 2: Customised size chart (for this study) versus the standard size chart by Aldrich, W. (2010))

Size/ Key Measurements	Size	Size	Size	Size	Size
UPPER TOSO	**16**	**18**	**20**	**22**	**24**
SSC-Shoulder	13	13	13	14	13
CSC-Shoulder	**12**	**14**	**13**	**13**	**13**
SSC-Across Shoulder	**35**	**37**	**38**	**39**	**39**
CSC-Across Shoulder	**37**	**40**	**41**	**43**	**43**
SSC-Nape to Waist	42	42	43	43	43
CSC-Nape to Waist	**41**	**42**	**43**	**43**	**42**
SSC-Upper arm	31	32	33	35	37
CSC-Upper arm	**36**	**34**	**37**	**40**	**39**
SSC-Chest	35	36	37	39	41
CSC-Chest	**40**	**42**	**44**	**45**	**43**
SSC-back width	36	37	39	40	41
CSC-back width	**41**	**43**	**46**	**47**	**51**
SSC-Bust	96	100	104	110	116
CSC-Bust	**103**	**107**	**112**	**121**	**128**
SSC-Under Bust	**85**	**91**	**93**	**101**	**102**
CSC-Under Bust	**87**	**93**	**96**	**103**	**104**
SSC-Waist	80	84	88	94	100
CSC-Waist	**85**	**92**	**94**	**103**	**107**
SSC-Shoulder to waist	**42**	**45**	**44**	**46**	**54**
CSC-Shoulder to waist	**44**	**47**	**46**	**48**	**58**
SSC-Shoulder to bust	**27**	**31**	**32**	**39**	**21**
CSC-Shoulder to bust	**30**	**34**	**36**	**42**	**34**
LOWER TOSO					
SSC-Hip	104	108	112	117	122
CSC-Hip	**127**	**143**	**147**	**153**	**162**
SSC-Waist to Hip	21	22	22	22	22
CSC-Waist to Hip	**29**	**25**	**26**	**26**	**43**
SSC-Hip bulge	**107**	**110**	**114**	**119**	**125**
CSC-Hip bulge	**131**	**146**	**149**	**152**	**168**
SSC-Thigh	**76**	**83**	**82**	**87**	**88**
CSC-Thigh	**78**	**85**	**84**	**90**	**92**

From **Table 2**, it is fascinating that there was only a 5-10cm difference between the customised chart and the standard chart related to the bust and waist measurements across the selected sizes. An enormous difference was observed in the hip measurements. Size chart for models with an African pear-shape figure had bigger hips measurements compared to the standard size chart. On the standard hip girth, an incremental change of around 25cm to 42cm was observed. The larger disparity on the hips between the standard and customised chart was indicative of the models used being bottom heavy and not conforming to the existing size chart. This points out the frustrations encountered by women with a pear-shape in a ready-wear retail store and the fact that they cannot find coordinates or a suit sized the same that fits their unique bodies.

Table 3: Average body measurements of bust, waist and hip for developed customised size chart and standard size chart

Size/Key Measurements	Size 16	Size 18	Size 20	Size 22	Size 24
SSC-Bust	96	100	104	110	116
CSC-Bust	**103**	**107**	**112**	**121**	**128**
SSC-Waist	80	84	88	94	100
CSC-Waist	**85**	**92**	**94**	**103**	**107**
SSC-Hip	104	108	112	117	122
CSC-Hip	**127**	**143**	**147**	**153**	**162**

The customised size charts for the African pear-shaped (Table 3) are only for guidance. Although this group of women are prevalent in 59.26% of women in South Africa, in the findings of Makhanya (2012), they should not, however, be considered as representative of the total population of South African women of African descent with pear-shaped body. This being a pilot study, the sample only represented a small selected group of women in Pretoria. It was found that a sample of 50 for this pilot study was rather small when the sample was divided into five sizes. Ideally, 100 in each size would be better; this would mean measuring a total of 500 women. Hopefully, the new body scanning system can in future overcome the problem of the time-consuming manual methods.

Conclusions

If the population in this study was representative, then the number of sizes developed within this range would likely provide convenience for the production of and provide satisfactory garments to the pear-shaped African customer as suggested by Beazley, (1998:67). In a larger population, it would be beneficial to both manufacturers and retailers to have size charts that are concise, and economical in the number of sizes, to resolve the problem of ill fitting garments. Although this is a pilot study, it would be possible to create customised patterns for the pear-shaped body without having to alter the standardised pattern. The researchers propose that a larger sample size be studied to confirm the findings of this study. Based on the inconsistent differences between one size and another, it is recommended that customised size charts specific to different body shapes be made available by retail groups that want to target such clientele. In order to resolve the problem of ill fit among the full figured pear-shaped South African women, suggested recommendations are presented.

Recommendations

Fashion designers and apparel manufacturers should utilise the developed customised size chart to formulate pattern blocks and subsequently design clothes for women with African pear-shaped figures. Foreign apparel manufacturers exporting to South Africa should be made aware of the new size chart and fitting problems encountered by this segment of the population, so as to take into account the diversity of figure types when manufacturing for the local market. This study may be replicated in future, but with the use of a much larger sample in order to generalise the findings.

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EMBRACING A CULTURE OF ACTIVE CITIZENSHIP IN INTERIOR DESIGN EDUCATION

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Abstract

Citizenship implies association and involvement in a community. Even though the conditions of involvement can be specified by government laws, citizenship is in fact not only a matter of politics, but actually an issue of culture and experience. It can therefore be described as a status and as a set of attitudes, associations and expectations that go beyond territorial boundaries. Active citizenship is the viewpoint that citizens should work for the improvement of their community. The notion requires active participation through economic contribution and volunteer work to improve life for all citizens.

In 2011, the University of Johannesburg introduced a program in Active, Critical Citizenship. The purpose of the program was to develop, through active engagement with issues, the basic understanding of every South African's rights and responsibility of citizenship The program in Active Citizenship was to enable students to understand their status of citizenship and to encourage them to exercise the rights and responsibilities which are associated with their citizenship. In addition, it also had to encourage students to work towards the improvement of their community through economic participation and service to others.

The Department of Interior Design chose to integrate the Active Citizenship program into the curriculum as developmental outcomes. This option was chosen for two reasons. Firstly, the Interior Design curriculum is tightly structured and presented little flexibility to include additional modules. Secondly, the majority of the topics in the Active Citizenship program were already integrated in the curriculum that was offered to students at that time. Aspects such as critical thinking, social accountability and environmental responsibility were already embedded in the majority of the modules presented in the Interior Design program.

In order to address the needs of the Active Citizenship Program of the University, the content of the topics that had to be included in the curriculum were categorised as the political exercise of citizenship, the rights and responsibilities of citizens, personal and professional citizenship, the social exercise of citizenship by way of understanding social divisions, and critical knowledge citizenship.

This paper will reflect on the manner in which the Interior Design Department implemented the developmental outcomes to address the Active Citizenship program needs. This paper will describe how the content was addressed in the curriculum of the Interior Design Department of the University of Johannesburg and show how this approach assisted in creating a culture of Active Citizenship in Interior Design education.
Keywords*: Interior Design, Interior Design education, Interior Design culture*

Introduction

The University of Johannesburg introduced a program in Active Critical Citizenship in 2011 with the intention to develop the basic understanding of every citizen's rights and responsibilities. Through active engagement with issues, the program was to enable students to understand their status of citizenship and to encourage them to exercise those rights and responsibilities by working towards the improvement of their community

through economic participation and service to others. In the implementation of this program, the Department of Interior Design at the University of Johannesburg chose to integrate the Active Critical Citizenship program into the curriculum as developmental outcomes.

The role of higher education in promoting citizenship is formally recognised by the National Planning Commission of South Africa. The recent National Planning Commission report declared the need for South Africa to have a higher education sector that will contribute to higher incomes, higher productivity and a shift towards a more "knowledge-intensive economy" (The Presidency 2012, p. 17). The report highlights the important role that education plays in achieving these goals and in doing so, develop good quality citizenship. In response, the Council on Higher Education confirmed that Higher Education should develop "citizens with knowledge, critical thinking skills and values" (Institutional Audits Directorate 2013, p. 19) that can attend to the challenges faced at all levels of society in South Africa. These challenges include the consequence of globalization, the economic uncertainty that currently exists and the growing unemployment of the youth.

Citizenship education is internationally recognised. The United Kingdom introduced active learning for active citizenship (ALAC) in 2004 as a community education program to promote participation in citizenship. Even though this program was sponsored by the government, it was positioned within communities who worked in partnership with universities and Workers Education Associations. The latter is a voluntary association that provides workplace and community-based learning. Similar government sponsored programs also exist in the United States of America, France, Finland, Indonesia and Brazil, to mention a few.

The intention of this paper is threefold:

- to explain the framework within which the Active Citizenship program was implemented in the Department of Interior Design at the University of Johannesburg ;
- to elaborate on some of the projects that were developed to encourage a culture of active citizenship;
- to discuss the lessons leant through these projects and their implications on the development of active citizenship within interior design education at the University of Johannesburg .

Underlying each of these objectives is the considerable potential that exists to develop and encourage a culture of *active* citizenship through the involvement with issues that are relevant to interior designers today, which will shape the world in the future.

Active Citizenship

Citizenship relates to the membership in a community and can be considered in two different ways, namely as a status or as an existence (Falk 1994). As a status, citizenship is understood as a formal recognition of belonging by virtue of a person's political affiliation or geographical position. Existentially, citizenship is understood as an approach to thinking, association and expectations that does not necessarily relate to any specific boundaries. In the case of this exploration, the interior design students at the University of Johannesburg are geographically positioned in Johannesburg, South Africa while they also share the association through their approach to thinking and outlook as interior designers. In educating citizenship, it is therefore important that students are made aware of their roles as citizens in both these contexts.

A culture of *active* citizenship, however, refers to more than the membership of a community; it also suggests the value of participation within the communities. Although active citizenship is a contested notion, instilled with different meanings and associations, it is generally described as being both an active practice and a status linked with civil rights (ggln 2012, p. 12). Active citizenship implies that citizens should work for the improvement of their community. The notion requires active participation through economic contribution and volunteer work to improve life for all citizens.

Heater (2004), in his discussion on the teaching of citizenship defines a citizen as a person who is "furnished with knowledge of public affairs, instilled with attitudes of civic virtue and equipped with skills to participate in the political area" (Heater 2004, p. 343). If this is the case, it goes to reason that students can be expected to critically reflect on their attitudes and conduct as citizens. For this reason they are expected to acquire knowledge in theory components, consider and reflect this knowledge in practical modules and deliberate on both through active participation in debate.

Research Methodology

The paper reflects on existing practice that is relevant to teaching and learning practice at the University of Johannesburg. It is the initial research phase for the development of a debate on the integration of active citizenship into interior design curricula both nationally and internationally.

Framework: Integrating Active Critical Citizenship

With the introduction of the Active Critical Citizenship program, the University of Johannesburg identified specific themes that had to be addressed in the curriculum. These themes included the political exercise of citizenship, the rights and responsibilities of citizens, personal and professional citizenship, the social exercise of citizenship by way of understanding social divisions, and critical knowledge citizenship (Table 1).

The Department of Interior Design at the University of Johannesburg decided to integrate the Active Citizenship Program that was initiated by senate, into the existing curriculum as developmental outcomes. The reasoning for this decision was two-fold. Firstly, the Interior Design curriculum in its current state is tightly structured and this allowed for little flexibility to include additional modules. Secondly, the majority of the topics in the Active Citizenship Program were already included, at varying degrees, in the curriculum that was offered to students at that time. Aspects such as critical thinking, social accountability and environmental responsibility were already embedded in many of the modules presented in the Interior Design curriculum.

Themes for Active Critical Citizenship Education
Political exercise of citizenship: Learning about the institutions, political problems and democratic practices. Being an effective citizen locally, regionally, nationally and globally by developing skills, values and knowledge.
Rights and responsibilities of citizens: Learning about the political rights and responsibilities of citizens.
Social exercise of citizenship by understanding social divisions: Learning about becoming positively involved in the life and concerns of their own community.
Personal and Professional citizenship: Learning self confidence and the appropriate social and moral behaviour in and beyond their communities.
Critical knowledge citizenship: Discussions / forum on current issues.

Table 1: Themes for Active Critical Citizenship Education

Aligned with Heater's (2004) discussion, the Department of Interior Design focused on the transfer of the Active Critical Citizenship by integrating developmental outcomes in the current curriculum. The education of public affairs is delivered by means of literacy in theory and practical modules, the skills to participate actively in matters by way of developing the ability to argue a case using the literary knowledge and the encouragement to approach citizenship with integrity, honesty and with moral values through debate and discussion.

In addition, the development of critical thinking and exploration of active critical citizenship is amplified as the student progress through the Interior Design course. This is clearly visible in the outcomes that are presented

in the learning guides of modules. At a first year level, the curriculum provides learning opportunities in the form of knowledge transfer on economic, environmental and ethical business practices in the Professional Interior Design Practice 1 and Theory of Materials and Finishes 1 modules. It must be noted that the Professional Interior Design Practice 1 module is not presented by the Interior Design department, but facilitated by the University's business school. It therefore has a strong business focus rather than an interior design perspective. It is only in the third and fourth years of study that the modules address professional practice with a specific interior design viewpoint. Further understanding on design, empire, colonialism and commerce is dealt with in the History of Art and Design 1module.

During the second year of study, the curriculum addresses the engagement and application of skills that were developed in the first year of study. The modules Interior Design 2 and Theory of Materials and Finishes 2 attend to matters of critical knowledgeable citizenship by expecting students to formulate and present argument, critique and opinions as responsible and participatory citizens. In addition, the module Professional Interior Design Practice 2 addresses the values and ethics in personal and professional conduct by promoting honesty, integrity, respect and tolerance.

The third year students are generally expected to apply their knowledge and skills to address matters identified through discussion and forum. The social exercise of citizenship theme is dealt with in Professional Interior Design Practice 3 through discussion of matters like law, especially contract law and intellectual property law and how it impacts on interior designers. In Design Theory 3 and History of Art and Design 3, the critical Knowledgeable Citizenship is dealt with through analysis, reflection and comment on topical matters while conducting research to attain knowledge that relate to world views. Matters such as gender in visual culture and architecture, feminism and such are also covered in these modules to encourage an understanding of social divisions and interests in race, class and gender. Science, technology and society, the impact of global warming and, environment responsibility is handled with sustainability and green design in Design Theory 3 and by way of discussion and forum during the annual Green Week held by the Faculty of Art Design and Architecture at the University of Johannesburg. This event is discussed in more detail later. In the module, Interior Design 3, students are expected to identify problems within a given context and are required to apply their literary knowledge and practical skills to develop solutions that relate to the matter. They are required to present argument, critique and opinion as a responsible participatory citizen.

Incorporation of themes for Active Critical Citizenship into the Interior Design Curriculum				
	First Year modules	**Second Year modules**	**Third Year modules**	**Fourth Year modules**
Political exercise of citizenship			Professional Interior Design Practice 3; History of Art and design 3	
Rights and responsibilities of citizens	Theory of Materials and finishes 1	Theory of Materials and finishes 2	Professional Interior Design Practice 3	
Social exercise of citizenship by understanding social divisions	History of Art and design 1; Professional Interior Design Practice 1	History of Art and design 2; Design Theory 2; Graphic interpretation 2	History of Art and design 3; Design Theory 3	Interior Design 4; Professional Interior Design Practice 4
Personal and Professional		Professional Interior Design	Interior Design 3; Professional	Interior Design 4; Professional

citizenship		Practice 2	Interior Design Practice 3	Interior Design Practice 4
Critical knowledge citizenship		Interior Design 2; Design Theory 2; Graphic interpretation 2	Interior Design 3; Design Theory 3; History of Art and design 3	Interior Design 4; Professional Interior Design Practice 4

Table 2: Integration of themes for Active Critical Citizenship Education in the Interior Design Curriculum

During the fourth year of study the students take the knowledge and skills of citizenship outside the University. They identify a problem within the geographical constraints of Johannesburg. Using critical knowledge, they formulate and present the problem or issue, develop an opinion and solution through discussion with external stakeholders. For example, students will identify a need or problem within a community, find a suitable space that can assist with the resolution and then engages in discussions to find solutions to their identified problem.

Implementing Active Critical Citizenship

In implementing Active Critical Citizenship into the existing modules, the Department of Interior Design made a decision that the focus had to be on activating the participation of citizenship rather than the pure transfer of knowledge. The challenge therefore for each lecturer was to address their teaching and learning practice in such a way that the existing student culture is challenged to move outside of higher education and into the communities outside of the University.

This activation of citizenship is particularly evident in the Interior Design modules, since this module is the major component of the curriculum across all years of teaching and learning, where all knowledge and skills are demonstrated. However, the success of a recycling project with the third year students in 2012 proved thus far probably the most successful in activating critical citizenship in a student culture that extend beyond the classroom. Breytenbach (2013) elaborates on the process and results of this project that addressed environmental responsibility.

Some projects within the Interior Design curriculum of the University of Johannesburg stand out as working examples where students engaged with social, economic and environmental issues. These projects show how students applied their knowledge of some complex issues and their effects on communities to develop opinions, arguments and proposed solutions to the identified problems. In addition, they utilised their skills to communicate a solution to identified problems and in some cases engaged in active discussion s and participated in dialogue on these issues.

Green Design Week

The Green Design Week is a Faculty initiative that engages senior students from all departments within the Faculty of Johannesburg to engage in a design problem that relates to environmental and sustainable issues. Students are divided into mutli-disciplinary work groups that work together for one week to find a design solution for an identified problem. Students are expected to contribute to the debate about the issues within the group. During this week, external experts are invited to provide additional information.

Neighborhood Market Design

In 2012, the third year students were requested to address the reuse of an existing building, to aid community engagement and involvement at a local level. The identified building had to provide an environment where the local people could trade with produce grown in the community gardens.

The students had the opportunity to engage in debate of food production and world population. During this debate, one of the solutions identified was the development of municipal parks for food production for local communities. Since a similar concept is already used in Melville in Johannesburg, a building was identified that had to be re-designed to accommodate the needs for this neighborhood market. This gave the students an opportunity to investigate the reuse of derelict buildings in an urban setting. The results, as shown in the examples in figure 1 and figure 2, was a contemporary environment created in an existing building within a community. This intention of the proposed environment is that the community can produce and sell foods grown within the neighborhood boundary.

Figure 1: Image of Interior Design solution for a Neighborhood Market by Sarah-Ann White

Figure 2: Image of Interior Design solution for a Neighborhood Market by Whitney Richardson

Poster design

For the module Graphic Interpretation 2, the second year students of 2013 were required to engage with the issue of homeless people. The students were encouraged to take a closer look at the problem of people who do not have the luxury of living in a home. Once the recognised the existence and other social problems associated with homelessness, they were asked to design a poster that will draw attention to this social problem (figure 3).

Figure 3: Poster to create awareness of the plight of the homeless by Clarice Brink, Carla Osiecki and Mlugisi Mhlungu respectively

HIV / AIDS project

The Institutional office for HIV and AIDS (IOHA) at the University aims to reduce the rate of HIV and AIDS infections in young people. This institution targets people below the age of 15 by encouraging them to stay HIV negative as well as the youth over 15 years old to create awareness of the lifestyle that can keep them free of the virus.

The third year students take part in this initiative by designing an exhibition stand the will create an awareness of the effects of the HIV virus. The students are required to engage with the subject matter so that they can communicate the information to other students through graphic applications on an exhibition stand.

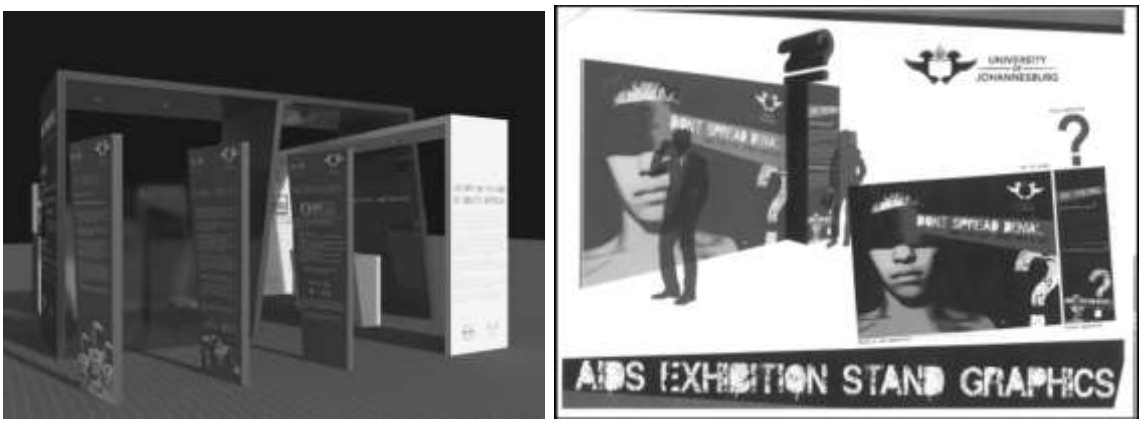

Figure 4: An exhibition stand design for HIV / AIDS awareness designed by Bruno Calha

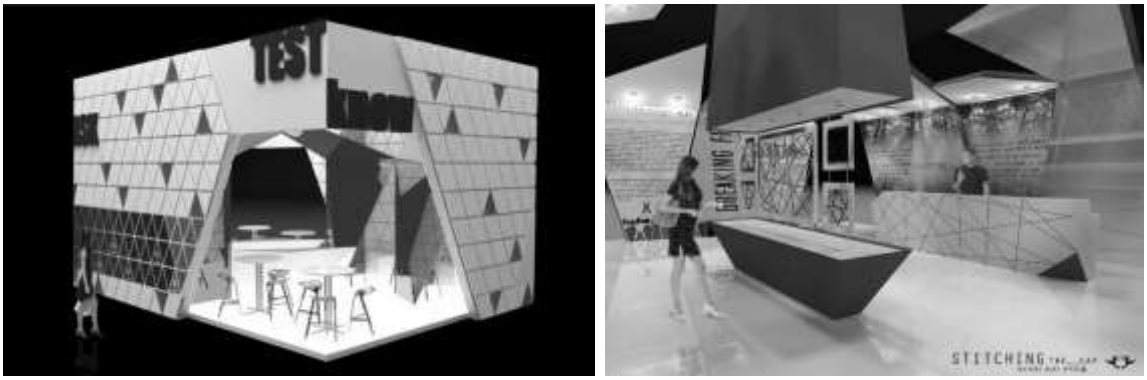

Figure 5: An exhibition stand design for HIV / AIDS awareness designed respectively by Renè Eitzen and Jessica Self

Conclusion

South African universities have an enormously challenging task. They must engage students intellectually while helping them to develop as citizens of our beautiful country who will be personally enriched and able to contribute to society. Stanford University, in its recent review of undergraduate education indicated that "maintaining a climate of intellectual engagement involves more than just admissions. It also requires sustained institutional effort, the continuous application of imagination and resources to provide our students with the opportunities they need to grow into the productive and responsible citizens we hope they will become" (Golbetz 2012, p. 76). Citizens with knowledge, critical thinking skills and values who can contribute to addressing challenges are vitally important at all levels of society, from individual families to society at large.

At the University of Johannesburg, the Department of Interior Design is committed to engage in teaching and learning activities that will embrace a culture of active citizenship in the education of interior designers of the future. The expectation is that these young adults will not only be aware of their responsibilities as citizens, but that they will actively participate in ensuring a better future for all.

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The decision-making processes of visually impaired consumers in an apparel retail environment.

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Abstract

One of the most severe disabilities known to man is the loss of sight, as it deprives the individual of the primary sense used to acquire information and knowledge about their direct environment. Visual impairment limits effective decision making as it severs the individual's essential involvement in society. Such individuals have restricted mobility and are mostly dependent on other people and as a result their ability to make decisions, and develop a sense of purchasing orientation is hampered. This research aimed at exploring the shopping experiences of visually impaired consumers in regards to clothing prices, colour choices, fibre content and the feel or hand of the fabric used for the garment. The study used qualitative research approach whereby a group of visually impaired consumers were interviewed regarding their shopping experiences in a retail environment. Following the gathering of this information, a decision making process is developed to aid the retailers and marketers in catering adequately for the blind consumers.

Keywords*: decision making, visually impaired and apparel retail environment*

Introduction and Background

The physical prevalence of fragilities refers to biological aspects of disability. Disability has a distinctive influence on an individual`s ability to do certain actions. The damage of eyesight is one of the greatest severe disabilities well-known to human beings. Loss of sight denies an individual one of the major senses through which to obtain understanding about the world and immediate environment surrounding one. Visually impaired persons are limited in terms of freedom of movement and lack of understanding communications which are necessary for full participation in the society (Sauerburger, 1993: vii; Kaufman-Scarborough, 2001).

Visually impaired persons cannot comprehend written communications at the same level with people who have their complete sense of sight, hence their greater dependence upon others. People who are visually impaired and totally blind do not have direct access to the printed material/words, nor can they directly experience such things as distant scenery, paintings, or objects (Scott, 1991:5). Kaufman-Scarborough (2001) observes that visually impaired consumers are challenged in their abilities to access market information and therefore they cannot perceive and process certain information in the way that is traditionally expected. For example, people deprived of visual stimuli rely on certain point of references such as feeling the surface properties of items, recognising subtle smells or sounds of certain things to provide a clue of what to expect (Ceranka & Niedzwiecki, 2007). Marketers of products are therefore encouraged to make these points of references easily available to the visually challenged consumers.

Visual impairment is not confined to medical attention only, but it is also a learned social role which is acquired through an ordinary process of social learning. Scott (1969: 14) report that immediate social interaction with sighted people, individuals learn behaviour and attitudes associated with visual impairment. The way that clothing swing tags and labels are presented to visually impaired consumers can either make them more alienated from the society if information given on the swing tags and labels are not done effectively.

Consumers' Decision Making Processes

Decision making is a set of cognitive processes, which interprets stimuli and organises thoughts and ideas (Newman & Cullen, 2002:134). Consumer decision making is depicted as multi-staged recognition before initiating a progression of actions to reach a conclusion of satisfaction or dissatisfaction (Harrel, 1990:740; Cox, 1967). As a point of departure on decision making processes, the traditional 5 stage model formulated from a normal sighted consumer (Figure 1) is used. The five stages (Figure 1) of a normal sighted consumer consist of Problem acknowledgment or recognition, Information exploration or processing, Assessment of alternatives, the response/purchasing decision, Repeat purchases and Post buying assessment (Shibury, Quick and Westerbeek, 2003:39-39; Cant *et al*., 2009:193-204).

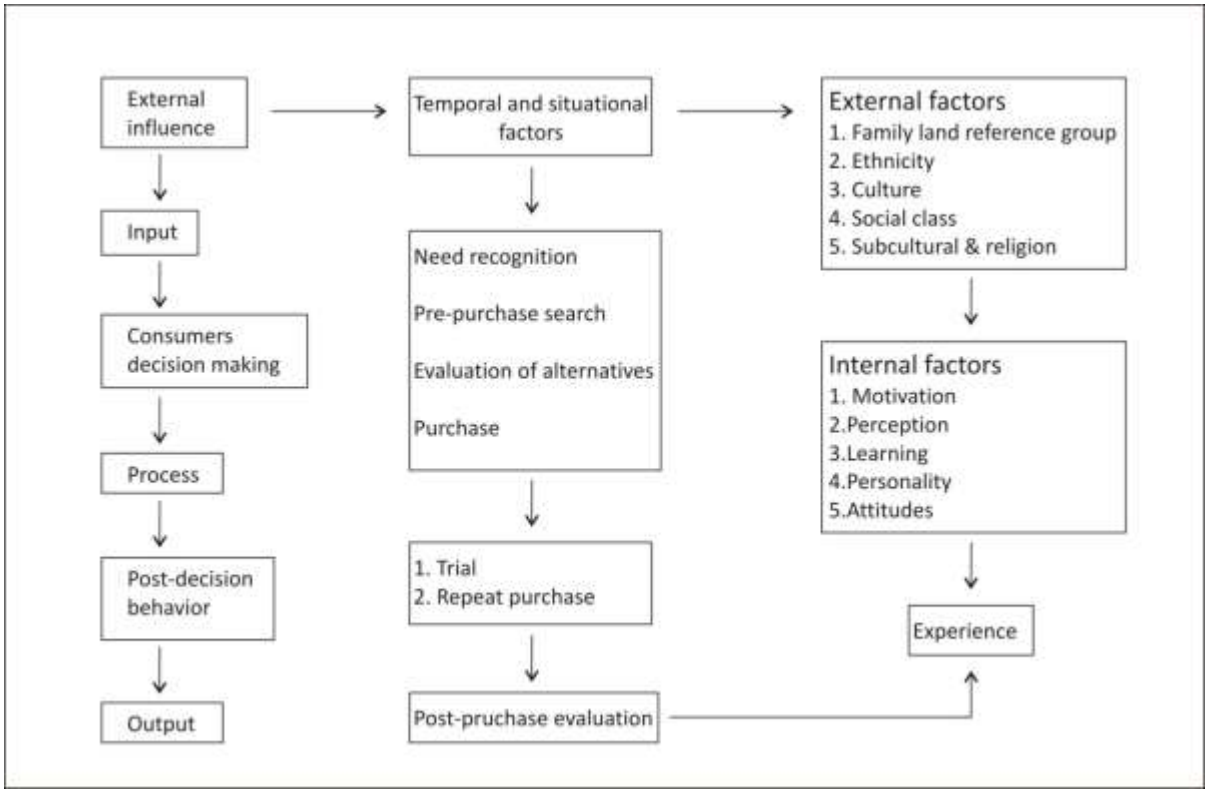

Figure 1: A logic format of sighted consumer decision making (*Source: Quick & Westerbeek, 2003:38-39)*

Problem acknowledgment:

This stage entails recognizing a problem, which arises when consumers recognize the need to change the existing state of affairs to conform to the desired or ideal state (Cant et al., 2009:195). For example when an individual is obliged to replace a worn out garment, a problem exists in form of desire to replace it with a new one. Problem recognition is predominantly a perceptual phenomenon whereby the difference between the existing and the desired state of affairs triggers a state of motivated behaviour. The result is the development of a spectrum of mental activities and altitudinal reaction which is referred to as "cognitive process". Problem acknowledgement for visually impaired consumer can be viewed differently due to lack of vision. If a garment for example is faded, visually impaired consumers will not be able to notice the problem; instead they rely on other people to inform them about the condition of the colours. However, visually impaired consumer will rely on his or her sense of touch, or tactile ability to feel the worn out texture or part of a garment in addition to what friends or relatives notice as a problem. An occasion, function or activities requiring a new garment could also be viewed as a problem acknowledgment. It can be argued therefore, that visually impaired consumers

will continue to experience challenges in identifying needs for new garment because they may not notice what is happening with existing inventories.

Information Search

Information exploration stage involves searching for and processing information. Once consumers recognize problems, they begin to look for information about a product to be bought (Cant *et al*., 2009:197; du Plessis & Rousseau, 2007:263). This information is sought and can be discovered by a sighted consumer in a wide scope that can be formal through electronic and print media as well as other informal means such as associates, family members and friends (Beech & Chadwick, 2007:89

The process of consumer decision making will depend on individual consumers' level of involvement in that process. The extent of the involvement is determined by the extent at which a consumer feels a product will yield results that they value. The participation process requires a motivational state of arousal that a person experiences about a purchase and includes both feelings and thoughts (Wilkie, 1990:80). It implies that the product(s) is important to consumers' self-identities and that can bring strong attitudes and preferences to the surface. In reference to visually impaired consumers information about a product is likely to be obtained from associates, family members and friends. This therefore denies visually impaired consumers a chance to independently search for information.

Assessment of alternatives

Evaluative criteria are the features or benefits a consumer looks in replying the direction of a particular type of problem (Beech & Chadwick, 2007:89-90). Consumers use different evaluation criteria when evaluating products and stores, and may change criteria in response to the situation or particular environment (Cant *et al*., 2009:20; du Plessis & Rousseau, 2007:265). Before purchasing any apparel item, a consumer might be concerned with, style, colour, cost, size, garment functionality and durability. The criteria for buying a winter jacket, for example, will include performance (thermal characteristics), durability, appearance and price - all these evaluative criteria require five common sense. The primary ingredients for enduring involvement are the products importance to the self-image of a consumer, on- going interests in the product's emotional appeal and its badge value to the consumer's reference groups (Assael, 1995:14). Visually impaired consumer therefore will be forced to rely on opinion leaders rather than their own favourable and positive attitudes (Schiffman & Kanuk, 2004: 45).

The purchasing decision

Consumer decision is the outcome of evaluation and involves mental process of selecting the most suitable alternative from a set of options that a consumer has generated. Consumers generally must select outlets as well as products. Decisions can be made by selecting an outlet first and then an item second or vice versa (Cant *et al*., 2009:202). Unfortunately for visually impaired consumer, such variables as point -of- purchase exhibit, price reductions, store design, store ambiance, sales personnel and brand or product stock outs cannot be seen due to lack of vision.

Repeat purchases and post buying assessment

The reason taking decision about a product is the perception of a difference between what is owned or in possession and what is needed. Consumers' buy certain products in order to fulfil their needs and seek greater satisfaction (Cant *et al*., 2009:202). Following some purchase, consumers experience doubts or anxiety about

the wisdom of the purchase, and this is referred to as post purchase dissonance. Evaluation of the performance of the product in relation to set criteria is done once it has been bought (Beech & Chadwick, 2007:90). The post buying phase involves different forms of psychological processes that a consumer can experience after buying a product. These processes include:

- Post – buying learning whereby the consumer discovers something about the product and stores the new knowledge in their long term memory that could be used in future decision making (Wilkie, 1990:80; du Plessis & Rousseau, 2007:268).
- Post – buying dissatisfaction relates to a negative assessment. Consumers experience d*issatis*faction when the outcome does not match their expectations or when they feel that the product bought falls short in noteworthy ways (Beech & Chadwick, 2007:90 -91). When consumers realize that an alternative would have been more attractive and fulfilling, they tend to be more dissatisfied with the product they chose (Sheth, Mittal & Newman, 1999).

Consumer develops certain expectations about the ability of the product to fulfill the instrumental and symbolic needs and these also apply to visually impaired consumer. Better perceptive approach of product information tends to lead to greater consumer confidence in purchase decision (Wendler, 1983). One of the attributes that consumer associates with are swing tickets, size and care labels information as an apparel product quality level (Abraham-Murali & Littrell, 1995a, b; Davis, 1987; Shin, 2000), and this is a significant step in a post purchase process to assess the needs for visually impaired consumer in this regard. Visually impaired consumers must be empowered and educated to enable them interpreting the meaning of swing tickets' information such as price, fabric content, and colour. Besides, size and care labels need to be presented on signs or text that is understandable to the visually impaired consumers. Such considerate of the information provided on swing tickets, size and care labels will help them to select and care for their apparel properly. Informative swing tickets, size and care instruction label that is understood by visually impaired consumers should increase their confidence in their capability to choose and care for apparel items and in turn must reduce their perceptions of risk relating to purchase items (Moore et al, 2001; Swinker *et al,* 1999).

The aim of this study was therefore to explore consumers' shopping experiences with regards to Clothing prices, Choice of colour and Fibre content of the garment. This aim in addition to existing decision making theories was intended to aid the development of a decision making process for the visually impaired consumers. Outlined in Figure 2, shows how the objectives were interrelated for the purpose directing research methods used in this study and ultimately achieving a decision making tool.

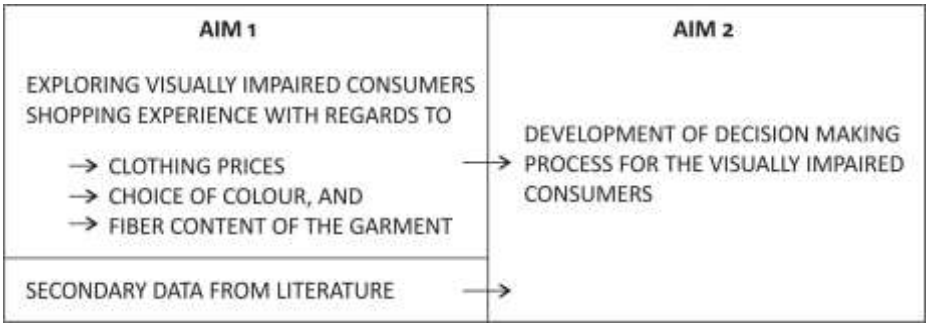

Figure 2: Research framework for this study

Methodology

In order to comprehend the aim of this study, this research has been conducted from a phenomenological qualitative approach with a descriptive exploratory nature. The focus was on visually impaired consumers' life

experiences in a clothing retail environment context. The qualitative research paradigm allows the study to be relevant on a phenomenological approach as it is the most probable paradigm to work in the exploration. In this view, qualitative paradigm enabled the researcher to increase an insider perspective of the participants as suggested by Babbie and Mouton (2001:217). According to De Vos (2005:351) qualitative research methodology allows for the accumulation of information-rich research.

The sample of this study was purposefully drawn from North West (Ga-Rankuwa) province of South Africa. Most of these visually impaired consumers are employed at A Re Itereleng Trust and Workshop for the Blind and they are approximately 80 in total (according to the director of Itereleng School for the Blind). Due to qualitative nature of this study, only 30 (five focus groups comprised of six people) participated in this study. All the participants were visually challenged mature females and males between ages 20 and 60 and were able to read brailed texts. Data was collected according to the framework given (Figure 1), first Aim1 data was collected to aid in the development of decision making process (Aim 2) and thereafter information gathered from Aim 1, was used together with secondary information from the literature (Section 2) of this paper to come up with decision making process appropriate for the visually impaired consumer (Figure 3) given under results in this paper. Focus Group interviews were carefully planned group with discussions designed to obtain participant's experiences while shopping for clothing. The interviews were interactive and were carried with five separate groups of six people at different times. The recommended number of people per group range from 6 to 10 as per Goss and Leinbach (1996). Data was captured by means of a tape recorder. This method ensured that nothing was lost during the interviewing sessions. The moderator who is also the researcher and the research assistant also took field notes during discussions session to capture the most important aspects of each question.

At least five focus groups were involved or the discussions proceeded until the point of saturation was met. Content analyses of interview discussions were categorized into concepts and sub-concepts for the purposes of identifying subtle underlying themes. Transcription of raw data included word-for-word quotations of participants' characteristics, enthusiasm, body language and overall mood during the interview. This was done by editing and encoding the individual focus group responses of data to eliminate errors and then placed into Braille literacy, Blindness history, Retail type, Retail frequency and Accompaniment categories. Triangulation, credibility and transferability checks as well as dependability and confirm-ability audits were used to ensure trustworthiness. The researcher had a prolonged contact with participants who were allowed to discuss their experiences at their natural environments, hence assurance of trustworthiness and neutrality of the findings of this study. Ethical approval for this study was granted by Tshwane University of Technology Research Ethics Committee., while consent and authorization were received from the Department of Social Development and the Itereleng Trust and Workshop for the Blind where the study took place.

RESULTS

The aim of this study was to develop a decision making process of the visually impaired consumers. In order to achieve this aim, focus groups of visually impaired consumers were interviewed to give account of their shopping experiences in a clothing retail environment. The results are presented in Table 1.

Table 1: Outcome of the focus group's discussion during the interview

DATA REFLECTING RESPONDENTS' DECISIONS MAKING PROCESSSES			
THEME	**CATEGORY**	**CONCEPT**	**PARTICIPANTS' RESPONSE**
DECISION MAKING PROCESSES	Need recognition	Maintenance Limitation , Credit Access, Occasion and Body Change	"My pants get worn out in the bottom part and between the thighs. After several attempts to patch the pants …" "I have a bit of credit to take new stuff…" "I buy when I attend a wedding…" "I buy clothes when I get frustrated by my growing belly."
	Information search	Family Accompaniment Assistance and Store Orientation	"I would ask my daughter to accompany me to the reasonably affordable store. As my daughter loves to do window shopping , most of specials and sales get the information from her" "…We usually ask the assistance to explain how the store section is so that we don't get lost …"
	Pre - purchase alternatives	Item location	"When we have finally got to the right place we then search for the actual shoe style that I like and try to fit it."
	Evaluation of alternatives	Quality, Functionality, Price, and Former Experience	"…Strength of the material , the practicality of the apparel, … "I normally compare prices…" "The shops where I am treated like a customer who is going to buy and not a beggar are where I go…"
	Purchase decision	Store Service, Pricing Fabric Characteristics and Aesthetics	"When the fabric feel right according to what I want…" "…I go back and buy due to good service…." "…Then I buy if the price is what is promised..." "I ask my daughter, if it looks nice on me"
	Purchase	Fit, Sensory Tactile, Affordability, Colour and Accompaniment Persuasion	"When the size is okay." "When the fabric quality is satisfactory according to what I can feel when I touch the apparel." "When the item is within a budget…" "The chosen colour does suit my skin colour..." "My daughter would persuade me to buy it…"
	Post purchase evaluation	Approval and Disapproval	"I am normally unhappy with the garments after using it..." "After wearing the item I normally get unsatisfied …" "I am normally satisfied with the clothes after using it"

As shown in Table 1, the various, themes, categories, and concepts are illustrated according to the 5 focus group responses when questioned about how they make their decisions from their state of need to their next purchase, there were many stages that overlaps with the traditional model (Figure 1), however, there are unique processes that emerged from the visually impaired group. The most common attributes that emerged

from all the five focus groups was then regrouped to evaluate their similarities, differences and new knowledge that developed, this eventually led to the VICDP being the nine stage process given in Figure 3.

As visually impaired consumers move through these stages, marketers have the chance to respond to and influence behavior with effective communication and marketing plans that address each of these stages and the variables that affect every phase.

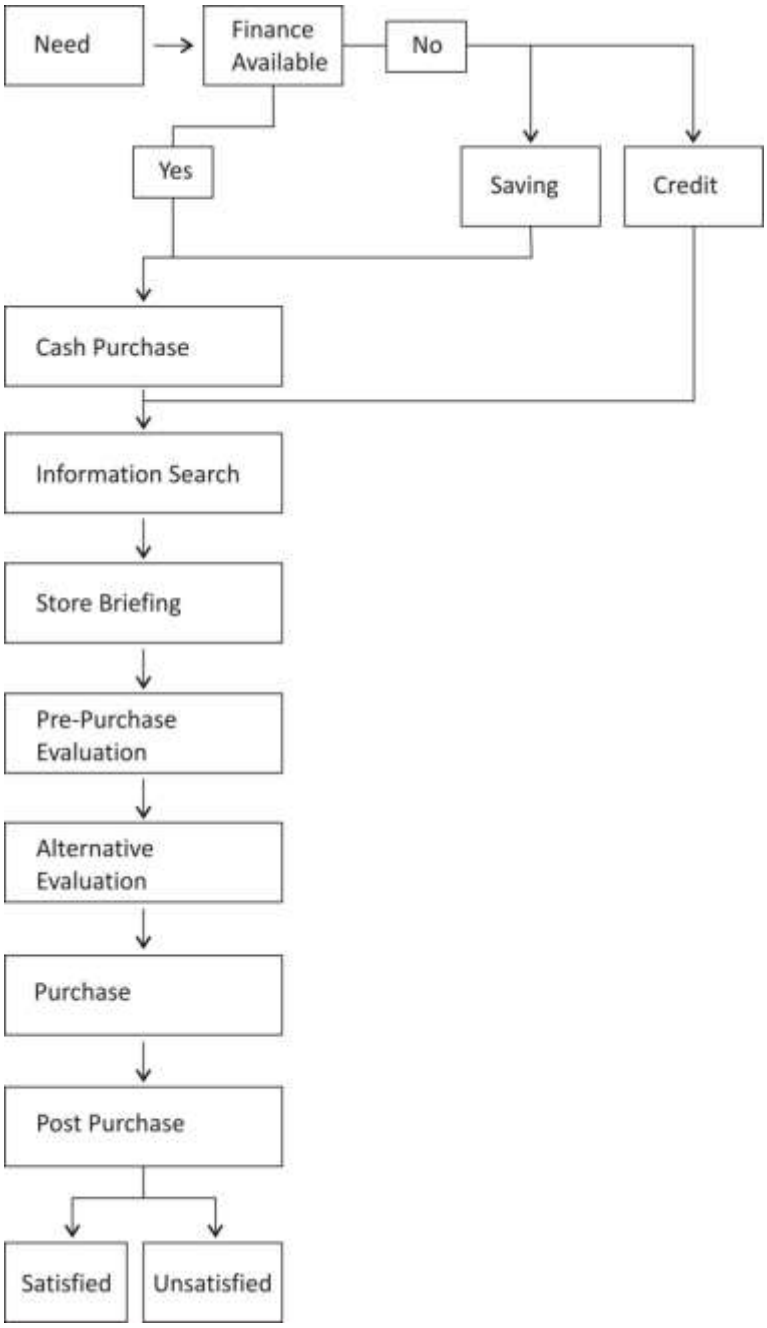

Figure 3: A decision making process for visually impaired consumer

The visually impaired consumer decision process (VICDP) model offers a chronological order of how blind consumers find their way in a world of consumption decision. The VICDP is adapted from seven step decision making model from Blackwell *et al. (2006:75)*

Conclusion

Although people with disabilities are part of the low income group, the study attempts to enlighten marketers about the significant proportion of the South African visually impaired consumers market. Additionally the study is expected to assist consumer behavior researcher to compare the traditional sighted consumer decision making process with that of the visually impaired consumers. The findings offer insight into a unique decision making processes of the blind. The visually impaired consumer decision process (VICDP) model as displayed in figure 3 shows the difference between sighted consumers process in figure 1 as adapted from the generic decision making model. The VICDP is adapted from seven step decision making model from Blackwell *et al.* (2006:75).
The results reveal that visually impaired consumers face challenges when participating in the apparel retail environment. To assist consumers at the checkout counter, it is important that the cashiers are trained by the retailer to do so to the best of their abilities.

Furthermore the study research into the retail area practice of visually impaired consumers in South Africa is nonexistent or lack thereof suggest that existing policies and practices regarding the making signs, purchase are based on the behavior of sighted consumers.

To make known the specific disability related shopping challenges faced by visually impaired consumers in South Africa, this study suggest that more work has to be done in order to address these challenges in the teaching of the retail management and / or consumers behavior for people with disability. The aim is to give the public policy makers the opportunity to empower the significant portion of the population, while fashion institutions play their role of community engagement as they teach issues affecting the visually impaired consumers.

Additionally architecture, interior and industrial design education should encourage improvement in the life of visually impaired persons in South Africa, by designing any product that empower the visually impaired group which can help advance their life styles and functionality within any exterior and interior retail environment.

Finally, the study has shown that unlike sighted consumers who are credited with capacity to receive and handle considerable quantities of information, blind consumers on the contrary undertake extensive pre-purchase searches and display a high involvement purchases as well as evaluation.

The use of qualitative data collection methods such as focus group interviews and quantitative demographic statistics contributed significantly to the formulation of VICDP. This will lobby to the positive action by the government, retailers, consumer rights activists and the association for the blind among others.

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THE DEMISE OF DESIGN PROGRAMMES WITHIN THE PUBLIC FURTHER EDUCATION AND TRAINING SYSTEM IN SOUTH AFRICA: A CASE FOR NON-FORMAL EDUCATION

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Abstract

This paper investigates the demise of design and related programmes within the public Further Education and Training (FET) system of South Africa. Policy documents regulating the provision of these programmes will be interrogated and the various changes which have occurred in the FET system, especially in terms of restructuring, will be highlighted. These changes have had adverse implications on design education, evidenced in the introduction of the National Curriculum Vocational (NCV) programmes and the unclear status of the 'old' Nated programmes. The paper concludes by advocating for non-formal education as a possible antidote for the poor availability of design and related programmes within the 50 public FET colleges.
Keywords*: FET, non-formal, design, education*

Introduction

The Further Education and Training system is complex and intertwined, however, this paper will only focus on public FET college training, which is comprised of 50 multi-campus institutions spread out across the country. There has been a concerted effort since 1994 to reform the FET system from its Apartheid legacies when the institutions were known as 'technical colleges'. The first minister of education in democratic South Africa, Professor SME Bengu, in the foreword of the White Paper on further education and training (DoE 1998, p. 8), projected that:

> A successful FET system will provide diversified programmes offering knowledge, skills, attitudes and values South Africans require as individuals and citizens, as lifelong learners and as economically productive members of society. It will provide the vital intermediate to higher-level skills and competencies our country needs to chart its own course in the global competitive world of the 21st century.

Furthermore, it was pronounced that one of the hallmarks of the new system would be its ability to offer training opportunities to out-of-school youth and adults, while also giving a second chance to those who failed to complete the General Education and Training strata (DoE 1998b, p. 14)[13]. Although there have been noteworthy changes and triumphs within the FET system since 1994, the poor provision of design education within the public FET colleges is a serious concern and threatens the overall growth of design education at postsecondary level. It should be noted that private FET colleges also play a prominent role within the postsecondary education landscape. Commentators speculate that the prominence of private FET provision is twofold, firstly, it is due to "the poor quality of the public [FET] system which is unable to accommodate increased demand", and secondly, because people "perceive" private education and training to be more aligned to the needs of industry than the public equivalent, especially in design and related programmes (Akoojee 2005, p. 16).

[13] General Education and Training refers to the education offered from pre-school (grade R) up to grade nine.

Design programmes in the 'old' Nated curriculum

The old 'technical colleges' used to cater for six vocational fields, namely, Business Studies, Engineering Studies, Social Services, Art-music, General Education and Utility Studies (Sooklal 2004, p. 106). The Art-music field was divided into three disciplines; Art and Design, Photography and lastly Music and Dance. The colleges offered Department of Education (DoE) accredited Nated programmes from level one to six (commonly known as N1 to N6). Non-Nated courses were not accredited and were "offered by colleges in response to skills needs, especially those of industry"; these were known as non-DoE programmes (DoE 2002, p. 107). Examination of the non-DoE programmes was the prerogative of the colleges. N1 to N3 was the equivalent of NQF level 2 to level 4 (grades 10 to 12), which falls under the secondary schooling system. N4 to N6 fell within postsecondary education and according to the NQF provided "possible continuity between FET and higher education" (Sooklal 2004, p. 107).

The enrolment percentages among the various FET vocational fields were rather lopsided. During 2000/2001 the most popular courses were in the Business Studies and Engineering vocational fields, which enjoyed 44% and 46% of enrolments at public FET colleges respectively[14] (Sooklal 2004, p. 107). The remaining 10% of enrolments was split amongst the remaining vocational fields, whilst the picture within private FET colleges followed a similar trend. Only colleges within the Western Cape, Free State, Gauteng and Eastern Cape provinces offered Nated Art-music programmes, notably with miniscule enrolment percentages (please see *figure 1*). The number of provinces offering non-Nated or skills based Art-music programmes were three, namely, Free State, Northern Cape and KwaZulu Natal. Only thirteen of the fifty public colleges were offering Nated and/or non-Nated Art-music programmes, spread across six of the nine provinces (DoE 2002, p. 22). The public FET colleges located in the Mpumalanga province, the Limpopo province and the North West province did not have any arts related courses within their offering.

Figure 1: number of enrolments within the Art-music vocational field per province in 2000/2001

	Eastern Cape		Free State		Gauteng		KwaZulu Natal		North West		Western Cape	
	Nated	Non-Nated	Nated	Non-Nated	Nated	Non-Nated	Nated	Non-Nated	Nated	Non-Nated	Nated	Non-Nated
N1-N3	70	0	120	16	503	0	38	0	5	0	404	16
N4-N6	118	0	71	0	155	0	0	0	0	0	156	0
Total	**188**	**0**	**190**	**16**	**658**	**0**	**38**	**0**	**5**	**0**	**560**	**0**

Source: DoE (2002 p. 63-86)

It should be kept in mind that these figures do not specify the exact registration numbers within the three disciplines in the Art-music vocational field and by which college. However these numbers reveal how students were seemingly attracted to the Nated programmes between N1 and N3. Only Eastern Cape had more enrolments in the post N3 phases. A simple explanation of this phenomenon could be that students who registered for N1 to N3 wanted to improve their practical portfolios in order to increase their chances of accessing university training. The FET colleges in this instance simply acted as a bridge between secondary education and universities. This information also gives valuable insight into the specific needs of the students,

[14] It should be noted that these demographics also influenced the type of courses the colleges would offer. Some colleges would go as far as placing a disclaimer on their prospectus' stating that: "The College reserves the right to only offer programmes/subjects that are justified by learner numbers and cost effectiveness" (*Ekurhuleni East FET College 2010*). This was mainly due to the state subsidies attached to enrolment numbers, which would be more if the enrolments were higher.

which seem to gravitate more towards using FET level training as a launch into university tuition, rather than seeing it as an end in itself.

During 2000/2001 the pass rate for the Art-music programme was at 86%, the highest amongst the six vocational fields and a respectable 28% above the national pass average of 58% in all the vocational fields (DoE 2002, p. 38). Factors contributing to these first-class numbers have not been scrutinised, but one can speculate that among those reasons was the staff commitment and the student composition. Because of the perception that the arts are a 'talent' field, only students who have the passion and particular interest for the various disciplines will most likely enrol, which will obviously have a positive impact on the performance.

The actual content of the Art-music courses varied from college to college. The Art & Design course was commonly referred to as visual arts. This course was offered from N3 to N6 (post grade 12). Students were required to complete twelve subjects in total, four during each level. Drawing and History of Art were the compulsory majors, whilst students had the option to select any other two subjects from the following roster: Graphic Design, Photography, Painting, Ceramics and Graphic Processes. These subjects were replicated in all the levels[15]. After completing their allotment of subjects, students were awarded a certificate, but had to gain eighteen months practical experience before a diploma was conferred to them.

Phasing out the 'old'

The FET Act of 1998 strongly recommended that these Nated programmes be transformed and restructured to respond better to the human resources, economic and development needs of the country. In 2006 it was announced by the education ministry that the Nated courses were to be discontinued. The intent to change these courses had been displayed three years earlier by then minister of education Professor Kadar Asmal (2003), who, at the opening of the newly merged Central Johannesburg College, stated:

> We cannot continue to offer the same old programmes that were offered by technical colleges thirty years ago. We should lay to rest the Apartheid assumption that students who choose to go to colleges are inferior and should therefore be offered uninspiring programmes. We need laboratory and aviation technicians. We have to develop mining and medical technicians. We need to open new avenues for our young people.

However, this denial of the 'old' programmes was reversed during 2009 when the Department of Higher Education and Training (DHET) revealed that, as a result of pressure from industry, they had decided to re-introduce some of the Nated courses. Mary Metcalfe, the Director-General of Higher Education and Training, noted that her department was not prepared to fund any of the revived Nated courses, pointing out that industry would have to subsidise the colleges for offering the courses (Gower 2009). This sounds feasible for major industries seeking skilled recruits, but such a proposition would be difficult for the arts/design industry. It would be unrealistic for design studios/companies or art galleries to consider supplementing the costs associated with training an Art and Design college student.

Furthermore, questions arise as to whether it is necessary to bring back the Art-music courses as they were, or if it would be more realistic and progressive to implement new arts related courses into the current NCV mix. These new courses would need to address the current needs and challenges of the creative industries; possible programmes could include: Art/Design Management, Art/Design Education, Art/Design Marketing etc.

[15] It should be mentioned that the researcher attempted, without any success, to solicit examples of the actual subject content from the concerned college.

However, such innovation would be stifled by the prescriptive nature of the FET curriculum[16]. As it stands, public FET colleges cannot develop their own content in response to the needs of industry. However, some colleges still offer the Art-music Nated courses, the most prominent being the Central Johannesburg College in Gauteng, the largest public FET college in the country by student numbers (Asmal 2003). The announcement by government literally saved the jobs of Art-music lecturers at the college, who were due to teach their last group during 2011. In practice, the process of phasing out these 'outdated' courses has been gradual and immensely criticised.

Design programmes in the National Curriculum Vocational

In 2006 then Minister of Education Naledi Pandor introduced the National Curriculum Vocational (NCV) as the new curriculum framework governing FET colleges[17]. Some of the major changes brought by the new curriculum include the introduction of one of the eleven official Languages,[18] Mathematics or Mathematical Literacy, and Life Orientation as compulsory subjects for all students enrolled at an FET college[19]. The NCV is comprised of the National Certificate (Vocational), which has eleven study fields: Civil Engineering and Building Construction; Electrical Infrastructure Construction; Engineering and Related design; Finance economics and Accounting; Hospitality; Information Technology and Computer Science; Management; Marketing; Office Administration; Primary Agriculture; and Tourism. These study fields reveal the overall neglect of arts/design programmes within the new curriculum.

Provision for Visual Art and Design has been made for grade 10 to 12 learners. Although these levels fall within the National Curriculum Statement (NCS), the actual subjects are considered as part of the FET phase. The idea is that learners will start specialising in a specific field whilst still in secondary school and the postsecondary phase will simply build on the foundations already laid. But there is a mismatch, because students who start doing arts/design in secondary school cannot continue with those disciplines at public FET colleges, since they are currently not available. Another major challenge with these FET phase subjects is that public schools do not have adequately trained teachers to teach these specialised learning areas, and even more troubling, the proper materials and equipment needed to coordinate these subjects are often lacking. The problem is further compounded by the current situation where the subject specialists mandated with training and supporting educators to rollout this arts curriculum do not possess the necessary skills and subject content to affect tangible change. This skills vacuum is induced because there are not enough specialised arts education programmes being offered by the institutions of higher learning and there is limited or, in most cases, no mobility for arts graduates desiring to access education courses or vice-versa.

Reasons for the omission of arts/design programmes within the NCV revolve around the apparent lack of economic viability and industry alignment of the fields. However, design does feature, albeit slightly, within the new framework through the Graphic Design and Multimedia subjects. The Graphic Design subject is part of the Marketing course and is offered as a "recommended optional subject" (DHET 2010a, p. 44). Multimedia is also offered as a non-compulsory elective subject in the Information Technology and Computer Science programme (DHET 2010a, p. 36). Both these subjects are offered in NQF levels two, three and four. The Department of Higher Education and Training had signaled that these subjects would be offered in level two as

[16] A prominent official from a large public FET college in Gauteng, who did not want to identified, noted that he desired to implement a music education and management course within his college but could not do so because of current restrictions with regards to curriculum formulation.
[17] Other policy documents that inform and compliment the NCV include the National Policy on the Conduct, Administration and Management of the Assessment of the National Certificate (Vocational) 2007 and the National Norms and Standards for funding Further Education and Training Colleges 2009 (DHET 2010a, p. 2).
[18] The curriculum prescribes that the language must be on First Additional Language level. However the document further highlights that "the language chosen must be the language of learning and teaching of the institution" (DHET 2010a, p. 35). By default, the language to be used will most likely be English at most, if not all, of the public colleges.
[19] Students are expected to obtain a minimum 40% for the Language, 30% for Mathematics or Mathematical Literacy and 40% for Life Orientation (DHET 2010a, p. 45).

from January 2011, but training lecturers in the new curriculum has been a challenging process for the department. The implementation dates for these subjects on level three and level four were set for 2012 and 2013 respectively. Colleges cannot officially offer the courses before the lecturers have undergone the necessary training within the new curriculum.

During the start of 2011, only ten lecturers representing seven of the fifty public FET colleges had received initial training in the Multimedia subject. These colleges were Vhembe FET in Limpopo province (Makwarela campus), Orbit FET in North West province (Rustenburg campus), Ekurhuleni East FET in Gauteng (Springs campus), Capricorn FET in Limpopo (Polokwane campus), South West Gauteng FET in Gauteng (George Tabor campus, Soweto), Port Elizabeth FET in Eastern Cape province (Russell Road campus) and College of Cape Town in Western Cape (Crawford campus)[20]. Worryingly, only five of the nine provinces were represented during the training. The training was a collaborative effort between the Department of Communications (DoC) and the National Electronic Media Institute of South Africa (NEMISA)[21]. The DoC pledged funded a follow up ten day workshop hosted by NEMISA for the ten lecturers during the course of 2011. This skills shortage also presents an opportunity for universities that have specialist multimedia or graphic design departments to assist in training FET lecturers.

Since it has been established that the DHET is inflexible with regards to curriculum, it becomes important then to look at the subject guidelines for these two subjects, only the level two subject guidelines will be reviewed. The formulation of these documents was heavily influenced by market and industry related forces. Firstly, the Graphic Design subject has nine learning outcomes on level two (see *figure 2*). These topics cover the basic theoretical and practical components of design, which have been weighted 40% and 60% respectively. After completing these topics students are expected, amongst other outcomes, "to effectively use basic design processes to compose concepts in a graphic design field" (DHET 2010b, p. 4)[22]. Some of the learning outcomes of 'topic 2' demand that the student "recognise and develop fundamental drawing skills; develop the ability to use drawing media for self-expression; demonstrate creative use of drawing techniques and processes; experiment with a range of mixed media techniques; and experiment with drawing as a tool to promote ideas" (DHET 2010b, p. 6).

Within the 'elements and principles of design' topic students are introduced to the history of art and design, where they "should be able to describe the history of art and design during the late 19th and 20th centuries and explain how previous design movements impact modern design and art movements" (Ibid). Other components of 'topic 2' expose students to terms such as line (and it's various qualities), shape, mass, texture, colour, space, balance and form (Ibid). The 'three dimensional design' topic has basic parallels with the sculpture subjects, where students have to consider the importance of form. And finally the 'photographic manipulation' topic directs students to apply or illustrate the fundamentals of photography such as colour, positive and negative, and duplication.

Figure 2: Subject and learning outcomes for Graphic Design level 2

No.	Topic	Weighting
1	Elements and principles of graphic design	20%
2	Formal drawing and observation skills	10%

[20]Upon consultation with one of these colleges in Gauteng, the college conceded that it would be unlikely that classes in the multimedia or graphic design subjects would be made available to students during 2011, due to the challenge of staff development in these disciplines.

[21] NEMISA is a non-profit private higher education institution established in 1998 as part of a government project that sought to train previously disadvantaged individuals, especially women, in "technical skills applicable to the TV, radio and broadcasting industries" (NEMISA 2011).

[22] As part of the practical examination students are required to submit a Portfolio of Evidence (POE), within a structured environment. This POE must be accompanied by research complied in a 'workbook' (DHET 2010b, p. 4).

3	Desktop publishing and digital design concepts	10%
4	Layout and typography	10%
5	Photographic manipulation	10%
6	Three dimensional (3D) design	10%
7	Multimedia	10%
8	Presentation animation	10%
9	Play-out and production	10%
	Total	**100%**

Source: DHET (2010b, p. 5)

The curriculum document also highlights some the critical resources necessary for teaching the Graphic Design subject, namely, physical, technological and research infrastructure, and appropriate human resources. The physical resources refer to a building or site that can adequately accommodate students and is suitable for teaching and learning. The technology and research resources refer to: "computers, scanners and printers for students to complete assignments, case studies and projects; software programmes; sufficient electrical power to connect computers, printers and scanners; access to the internet to do research; daily newspapers" etc (DHET 2010b, p. 9). The human resource needs refer to a lecturer who should "have a qualification in Graphic Design; be a subject matter expert; be a competent lecturer; be a life-long student; be in possession of a NQF level 5 teaching qualification; and be conversant with OBE methodologies" (Ibid). Currently, most of the public FET colleges possess only a few of the requirements tabled by the DHET, namely, the large building facilities and appropriate technological equipment. The major negative is with regards to the human resource needs, where existing lecturers are untrained in the graphic design domain.

The curriculum for the Multimedia subject is structured according to that of Graphic Design. The theoretical and practical components are weighted the same and the physical, technology and research, and human resource needs are almost identical. Differences can be seen in the subject outcomes and subsequent weighting (see *figure 3*). Furthermore, multimedia seems to be an extension of graphic design, requiring in-depth engagement with computer related design.

Figure 3: Subject and learning outcomes for Multimedia level 2

No.	**Topic**	**Weighting**
1	Principles of multimedia	15%
2	Concept and types of storytelling	10%
3	Rendering and typographic skills	10%
4	Sound production and editing	15%
5	Photographic techniques and editing	20%
6	Introduction to desktop publishing and layout	10%
7	Production and editing of 2D and 3D animation	20%
	Total	**100%**

Source: DHET (2010c, p. 5)

A case for non-formal education

It is clear from the evidence provided above that the prominence of design/arts programmes within the NCV is rather precarious. Although provision has been made for graphic design and multimedia, it is unfortunately not comprehensive enough as they have been merely included as recommended optional subjects. Public FET

colleges exist to compensate for the chasm between secondary schooling and university training, but the poor status of design and related programmes in this arena further stifles the potential for the growth of design education as a whole. But more critically, it means that design education will remain a privilege for those who can access universities and select private institutions.

In order to broaden the accessibility of design education, the researcher posits that non-formal design education can be an effective tool in this regard. Coombs and Ahmed (cited in Reynalds 2006, p. 8) define non-formal learning as "any organised, systematic, educational activity, carried on outside the framework of the formal system, to provide selected types of learning to particular subgroups in the population, adults as well as children". Tight (2002, p. 72) adds that non-formal training, to its advantage, "takes place under the auspices of organisations that do not need to adopt the more restrictive frameworks and accreditation systems of the formal sector". In other words, non-formal training has the advantages of formal system without the red tape that typifies it, as evidenced in the rigidity of the FET curriculum. Within this context non-formal education can take the guise of partnerships between industry/specialised bodies and organisations/institutions located in the periphery. Ideally, these institutions can include public FET colleges, as they already have the basic infrastructure and mobility to maximise such partnerships. An example of the potential of non-formal training is the relationship that existed between Funda Community College[23] in Soweto and Vega School of Brand Communications in Johannesburg.

The relationship with Vega began in the late 1990s as a mini exchange programme when some of the senior students from Vega went to Funda for a full day workshop in drawing, printmaking and painting. After the workshop the students were required to produce a digital artwork promoting some of the interesting results derived from the workshops, of which they had a month to work on. The same would apply to Funda students who also visited the Vega campus to receive workshops in digital media and would have to produce an artwork of the experience in their preferred medium. Subsequent to this exchange was the formal opening of a Vega satellite school on the Funda grounds offering courses in various communication streams. The project was called the Imagination Lab, which also offered learnerships in advertising and various other design streams. The true value of non-formal educational activities such as the one cited above is not in offering accredited courses to students, but is rather found in presenting structured learning under the auspices of a professional body with the express aim of transferring critical skills and knowledge.Besides its shortcomings, the old technical college system had scope for such dynamic and responsive courses through the non-Nated programmes. Through the non-Nated courses, colleges had the freedom to conceptualise and offer courses that responded to the immediate needs of industry and most importantly, the needs of the students. Therefore, it is distressing that the scope for such creativity is lacking within the NCV curriculum regulating the public FET colleges.

Conclusion

This paper outlined the existence of design/arts programmes within the previous technical college system and the current NCV framework for FET colleges. It is evident that the new NCV curriculum does not place considerable value on design education. Only graphic design and multimedia have been included as recommended optional subjects in the Marketing and Information Technology and Computer Science courses respectively. The current constraints within the NCV framework are a serious obstacle for the provision of design education within the postsecondary phase. The poor visibility of design education in the NCV threatens the growth of design education and closes the door of opportunity for aspirant students located in the periphery. It is posited that this vacuum can be augmented using non-formal educational strategies. These

[23]Funda Community College was a champion of non-formal education. Since its formulation in 1984, the school has had fruitful partnerships with the University of South Africa and the University of Witwatersrand using the non-formal training strategy (see Sidogi 2011).

strategies can include reciprocal partnerships between the various design industries and organisations/institutions such public FET colleges that have a footing within the marginalized areas, where design education continues to beunder nurtured and in most cases non-existent. More importantly, this vacuum presents opportunities for universities with strong design departments to engage with their most immediate public FET colleges to foster mutually beneficial partnerships, where the universities share their skills and best practice teaching methods with the educators at the FET colleges. In-turn, universities will profit by creating a pool of potential adequately prepared students from the FET colleges. Ultimately, strengthening the provision and quality of design education at public FET colleges can, amongst other benefits, result in the sustained growth of design and related industries in South Africa.

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DESIGNING EDUCATION FOR SALE: A PRICE TAG ON UNIVERSITIES OF TECHNOLOGY

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Abstract

The world exists and is driven by need and yet the notion of education remains static. The new dispensation of Universities of Technology (UoT) in 2004 created a sense of anxiety and exhilaration simultaneously. UoT as a centre of educational delivery has implications for the new role which Higher Education will play. This also impacts on Departments of Visual arts and design within such institutions. The South African context of education is layered with social issues which impact on a broad spectrum of its development. This paper considers the idea of education being reconstructed as a vehicle for social upliftment rather than only towards knowledge creation and secondly the need to package education within a business minded position to support economic development. The benefits of an entrepreneurial university broadens our view on education as it engages with the complexity of the world, knowledge generation towards problem solving and allows for risk taking. Central to these two pillars is the value of design thinking as education today is seen as an entrance into the world of work.

Keywords*:* entrepreneurship, higher education, innovation

Introduction

There is a paucity of information relating to South African UoT's even though these institutions of higher learning were initiated in 2004. The aim of this paper is to unpack the value attached to a UoT in a South African context. It further reviews the notion of the assumed role of UoT's as entrepreneurial institutions. Within this framework new educational programme offerings for 2016 are currently being prosed for acceptance by the Department of Higher Education and Training DoHET. Such programme offerings would become commodities to the general public. The methodology used to support this paper builds on previous research, publications and presentations, current international and local literature. I reflect briefly on personal experiences with other institutions of higher learning, the academic and entrepreneurial trajectory of the Vaal University of Technology, Vanderbijlpark and the Department of Trade and Industry.

The content of higher education programme offerings in South Africa provides for an opportunity at present to reinvent itself and give vision to relevant, applicable knowledge and a curricula which should focus on problem-solving skills, interpersonal communication, and learning to learn (Subotzky 1999, pp. 418).This educational paradigm shift should be in keeping with the constant changing of our evolving society that is infused with notions of being first world and competitive. However one should not be blinded with euphoria regarding this opportunity but be mindful that the residue of apartheid sometimes clogs and blocks new systems and practices which propose to rupture the safety and security of individuals' knowledge base. Secondly the state of secondary schools education impacts directly on higher education's delivery on a healthy economy and lifestyle. Thirdly, the students currently enrolled at universities do not embody our values attached to education.

The concept of a UOT in South African has been discussed and debated with particular reference to the understanding of it being a university with a technology status. UoT's further expanded the idea that higher education fed towards an elevated status of faculty and educational offerings. This stands as opposed to the former Technikon institutions which harboured a lesser status than traditional universities. The seminal paper of du Pre' (2004, p. 10) on the role and position of UoT's within a South African context proposes learner-centeredness and the development of knowledge through innovation which can be commercialised. However, the majority of South Africans have grown up with little home experience of business innovation or entrepreneurship and hence do not view themselves to be potentially as such (Co & Mitchell, 2006 pp. 349).

This assumes the position of a UoT as an entrepreneurial institution, an argument which is also supported by Winberg's (2004, p.38) claim that the creation of a UoT is a national plan for "universities to contribute more meaningfully to social and economic development". De Beer (2010, p. 92) further states that the interaction and co-development of links between government, industry, higher education institutions and creation of partnerships are crucial elements of the technology transfer value chain. According to du Pre' (2010, p. 21) what is integral to a University of Technology is the relevance of its curricula and research programmes, which consider problems and concerns of industry, community and society at large. Johnson, Louw and Smit (2010) posit that the afore-mentioned must be done in service to society thus making knowledge tangible. Such thinking propels and drives a UoT into an environment of entrepreneurship which results in a paradigm shift for faculties and current and future educational offerings.

Higher education's relationship with industry

A relevant higher education offering insinuates a binary opposite to an economy when one considers the global and national reports on how higher education in South Africa affects the well being of its economy. This statement is supported by the Global Entrepreneurship Monitor (GEM), 2010/11/12, the Higher Education South Africa (HESA), 2009, Development Bank of South Africa (DBSA), 2010 and the World Bank, 2011 reports. These reports indicate clearly that entrepreneurship is imperative to the wellbeing of any economy and should be implemented within South Africa.

Ideas of job creation and poverty alleviation are the basis on which the GEM report positions itself. This problem is especially evident amongst the country's youth, who more often than not lack the experience, skills and education necessary to access employment in the formal sectors (Herrington 2010, pp. 12).

The HESA report directs attention to the fact that the knowledge, skills, competencies and values of new graduates may be out of sync with the needs and expectations of employers. Secondly, the notion of skills may need to be redefined within the context of a changing world of work. Higher education is expected to do better and more, not only in terms of the quality of graduates produced, but also in relation to the number and type of graduates produced within specific fields of study (Griesel & Parker 2009, pp. 7).

The Development Bank report was of the opinion that higher education must cultivate the knowledge, competencies and skills that enable graduates to contribute to economic development, since such development can facilitate initiatives geared towards greater social equality and social development. In many cases there is also a need for extensive restructuring of qualifications and programmes to make curricula more congruent with the knowledge, expertise and skills needs of a changing economy (Badat 2010, pp. 16).

The report submitted by the World Bank was of a similar opinion that "higher education has a uniquely important role in resolving the persistent skills shortage in South Africa by producing qualified graduates and postgraduates and by generating research and innovation. Raising education and skills levels are crucial not only for increasing workforce productivity, but also for enhancing the innovative capacity of the economy and

facilitating the absorption and diffusion of new technology. The interaction of these factors along with the quality of education, are what propel economic growth" (Skills, Gap & South 2011, pp. 1).

Re-curriculation considerations

The South African context of UoT's stands at a pivotal position to conceptualise its programme offering as a currency for enhancing national competitiveness and as a lucrative service that can be sold on the international market. The argument that Jansen presents in his article, *Mode 2 knowledge and institutional life: Taking Gibbons on a walk through a South African university* that entrenched institutional rules and behaviours threaten to undermine any attempt to rethink the research and practice of education even when such restructuring appears to work in the best interest of students (Jansen 2002, pp. 1). Although this referred specifically to engineering students at the University of Durban Westville, his statement holds true within any educational environment. The mind shift to reposition an entrenched programme offering is easier said than done. Rather than merely stipulating new procedures to enhance the functioning of higher education, this may be seen as attempts to undercut the power and control of academics over knowledge production and reproduction (Naidoo 2003, pp. 250).

A roundtable discussion held at the University of Johannesburg in 2011, after encountering a discrepancy in the assessment of a Masters students' community based project submission, raised much discussion. "Research into community action embraces a complex and multi-modal approach. It needs to accommodate practice, action and experience, and not be limited to traditional academic methodologies. Critical, innovative and creative responses to these questions would be necessary to engender a vital approach to indigenous South African research practices. The contribution of action-based research lies in integrating theory with practice, and creative production with the challenge of enhancing active citizenship" (Berman 2011). Within this context the assessment is not reliant on a prescribed rubric and the question raised was what process of assessment would be "academically acceptable" which benefits both the student and the community? It is not clear at present how postgraduate art and design students can engage in meaningful education and socially embedded research without it being appraised as scholarship. It is also imperative that the process of entrepreneurship initially has its foundations in persons and intuition, and society and culture (Morrison, A., 2000 p59).Higher education is being challenged to become more responsive to societal needs and to emerge from its myopic absorption with the detached concerns of ivory tower academia (Subotzky 1999, pp. 402).

Higher education today is an important pivot of leverage which can gain the confidence of society as imperative to their economic well- being. Industry has already recognised its dependence on higher education for the provision of competent employees. It is for this reason that industry approaches higher education institutions to advise and influence as to its needs and shortfalls experienced. This interdependent relationship would make a significant contribution to knowledge generation and the economy. In particular, the ability to learn how to learn and to innovate have been singled out as indispensable to the 'high skills' required in industrial and vocalised by governments. The assumption underlying these mechanisms is that the actions of students as consumers will foster competition between universities to result in a more responsive, flexible, efficient and better quality teaching which is more in alignment with the labour market. (Naidoo 2003, pp. 252) This symbiotic relationship would realise a flexible and relevant programme offering in higher education and an almost seamless transition from classroom to work space.

The South Africa clothing and mercantile industry which includes fashion chain stores are plagued with direct imports from China. On the one hand the South African government celebrates the signing of new agreements with China, the same South African government struggles to lower its unemployment index. The reasoning behind this apart from the signed agreements is that the South African textile industry cannot deliver large quantities timeously, there is a general lack of skill available and locally manufactured are more expensive that

the importation. One of the reasons this occurs is that clothing companies cannot employ a specific specialist to render tasks which will financially benefit the company such as a mercantile technologist. Higher education does not provide for such, instead a student who studied as a fashion designer is employed who is in a completely different field of expertise. This is the abnormalities or conundrums that destabilises and maim our economy.

One of the universal changes in higher education is its moving out of the ivory tower to become more responsive to the needs of the immediate community it serves as well as play a vital role in developing and structuring a new economy. This is a shift from a rigid, controlled education to a more open and interactive higher education system. The latter is sensitive to and recognises the student's different learning styles as well as considers the social and economic changes within its environment. This is not an easy task to develop a new offering which is a guaranteed success. Considerations of secondary schooling education, access to higher education and the flexibility inherent within the faculties of higher education must be considered factors in realising a proposed entrepreneurial education at UoT's.

The designing of a programme offering must consider that the learners need skills that help them cope with complexity (Dym, Agogino & Eris 2005, pp. 105). This echoes the fact that higher order skills are imperative within learners to accomplish the considered changes required and justified in future higher education offerings. Learners should be able to comprehend that their educational learning have social and ethical responsibilities. In constructing a new approach to education which addresses global and national imperatives, opportunities should be built in to improve students' ability to work in teams. Other factors such as problem solving, being creative in responding to challenges, a work ethic and communication skills are basic tenets for a progressive economy.

A valuable work related learning module, Work integrated learning (WIL) which is the most commonly practiced in higher education, is the component of learning that focuses on the application of theory in an authentic work based context. It addresses specific competencies identified for the acquisition of a qualification which relates to the development of skills that will make the student employable. (HEQC 2004, pp. 26). There are programme offerings that have components of such learning established long before the hype of entrepreneurial universities. These are specifically with the visual arts programmes, engineering, education, amongst others. Within the visual arts, such module components drove student participation in live projects, requested by companies. Companies also realised quickly that by engaging in such ventures with higher education, they had greater valued designs and the costs were cheaper. Students realised the value of a virtual/ real job experience with their personal take to a project brief and engaging with a client.

Subotzky argues that the final White Paper makes considered references to the notion of both a global and national priorities. Higher education committed to the responsibility of establishing the basis "for the development of a learning society which can stimulate, direct and mobilise the creative and intellectual energies of all the people towards meeting the challenge of reconstruction and development" (Department of Education 1997, p. 7). He further states that the purposes of higher education in the context of contemporary South Africa must "contribute to and support the process of societal transformation outlined the RDP, with its compelling vision of people-driven development leading to the building of a better quality of life for all". It must also "provide the labour market, in a knowledge-driven and knowledge dependent society, with the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern economy" (ibid.) (Subotzky 1999, pp. 412).

On a larger scale, South African UoT's currently have established various business units and a few institutions have created science park facilities and set up incubators with the assistance of the South African Department of Trade and Industry. It is imperative that Government recognises the entrepreneurial trajectory initiated by

an institution and financially supports such initiatives. This realises closer links and relationships being established between the university and the business sector. The current value of UoT's is not only its direct educational offering but the recognition of technology transfer as part of its make- up. It is for this reason that technology transfer offices are established to render services to business and industry as well as generate research and innovation. Such establishments are business ventures in itself which would require patent protection for new products being developed.

Conclusion

Higher education in South Africa must provide education and training to develop the skills and innovations necessary for our national development and successful participation in the global economy. It has no option but to restructure its programme offerings to face the challenges of globalisation. The value and content of new offerings will be available from 2016 to a new cohort of students. Institutions are closed to what content delivery is on offer by other UoT's as institutions are not sure themselves of the waters they tread. The affirmation that creativity and innovation is embedded within newly designed education packages can create the notion of academic capitalism seated within higher education is the new offerings are consumed and prove reliant.

The reality that the visual arts are a major contributing creative industry injecting directly and indirectly into the economy, cannot be ignored. In response to this, it is imperative that Art departments identify and resolve their niche areas which would become their flowing currency. It is a given that higher education institutions will begin waging competitive programme offerings from 2016 which also establishes their independence from a once generic offering. The positive view on the new offerings is that the individual and departments almost secretive knowledge of niche areas to be serviced would be beneficial. The isolation of gaps in what could and should be offered would cover a vast expanse of neglected industry needs and a refreshed programme offering. The new offerings are not simple thumb sucks but researched and bench marked content that is real and flexible. The flexibility of the offering is the sustaining factor which speaks to the evolving nature of society. In this way higher education will be driven by need and not ivory tower academia.

New offerings can get carried away with its new found sense of being however it is imperative that the learner is always considered when directing a new curriculum. Current thinking is to impose learned values on students without the realisation that students today can multi-task, their attention span is short and that they are technologically savvy. The development of competencies, skills, aptitudes and values towards being entrepreneurial does not instantly create success although it adds value to the individual. The learner must be able to understand that the career choice selected will be the driving content of the entrepreneurial endeavour. This assumes that the higher order skills of creativity and innovation, skills expected in the workforce today must be inherent in the learner.

Research results indicate that the entrepreneurship education in South Africa is in its developmental stage, although it is perceived as important in elevating the profile of any institution and there is increasing commitment from the institutions in academic, research and outreach offerings in entrepreneurship (Co & Mitchell 2006, pp. 348). It is imperative that a holistic education is the content of what we offer and that entrepreneurship is an aspect of that education.

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THE MYTH OF UNIFIED GLOBAL CULTURE: TRANSCODING NATIONAL CULTURES WITHIN WEBSITE INTERFACES

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Abstract

This paper probes two areas relating to transcoding culture in a website interface development context. Firstly, culture is interrogated through the lens of current anthropological models of dimensions (traits/tendencies) of national culture. Secondly, transcoding anthropological models of dimensions of national culture into culturally adaptive website interfaces through the graphic design process.

The world is rapidly moving toward purely digital visual communication rendered via computer code, the realm of computer programmers (coders). All too often ignorance of the graphic design process leads to technology centred website development rather than appropriate visual communication. Website development teams typically consist of coders, marketers and/or business people. A common denominator across website development teams is the notion of target audience or web Users. While the term "User" is commonplace in coding language, the ability to adjust visual communication within website interfaces, to maximise the User experience or to elicit a desired behaviour or action, remains a graphic design skill set.

Knowledge of the intended target audience is vital in graphic design terms because it informs decisions pertaining to visual communication. For websites with global Users, the target audience could be from any country. In the context of such a broad target audience website interfaces become generic as opposed to culturally adaptive.

Certain marketing literature from the eighties and nineties theorises that the Internet (communication technologies) would lead to a unified global culture, where Users from different cultural backgrounds and countries are homogenised into a single mass culture. This would simplify website interface design because there would be a single culture target audience. Anthropological and other country specific marketing literature does not support the notion of a unified global culture. Research shows that an individual's national culture remains a critical factor in international marketing contexts.

Cultures, specifically national cultures, offer graphic designers a means of segmenting global audiences into smaller groups with common cultural dimensions. These dimensions may, in theory, be transcoded by graphic designers from the anthropological to the visual in order to produce culturally adapted visual communication within website interfaces in order to maximise the User experience. There is currently only limited evidence of research in this field. This research does not focus on South African national culture, but on foreign national cultures in an effort to better understand cross-cultural web user-interface design.
Keywords*: Culture, dimensions of national culture, graphic design, culturally adaptive website interfaces*

Introduction

Marshall McLuhan is credited with coining the concept of the 'Global Village', in the context of electronic media, where person-to-person communication is possible regardless of geographic distance (de Mooij 2004, p. 1). In a marketing and consumer context, literature from the eighties and nineties theorises that the Internet (communication and media technologies) would lead to a unified global culture, where Internet Users from different cultural backgrounds and countries are homogenised into a single mass culture. The instantaneousness of media communication and the global ubiquity of certain television shows, products and brands appears to reinforce the notion of the global village and by extension the existence of the single mass consumer however, the reality is different (de Mooij 2004, pp. 2-3). The Internet is not leading to homgenisation, rather the demand is for the ability to adapt to meet the needs of local contexts (de Mooij 2004, p. 10). Analysts of organizational and business communication, such as Geert Hofstede, have developed cultural theories through which the impact of culture on different groups of consumers can be ascribed to differences in their national culture. The impact of these cultural theories/models on business and commerce have been addressed by other authors (Marcus & Gould 2000, p. 34). This paper interrogates the value of such cultural models within the visual design of website user interfaces as a means of adapting to the local user context. Emphasis will be placed on Hofstede's dimensions of national culture as basis for analyses.

The notion of "national culture" is widely acknowledged and books have been published on this subject. Hofstede and Hofstede make the following observation about national culture:

> "The culture of a country – or other category of people – is not a combination of properties of the "average citizen" nor a "modal personality." It is among other things, a set of likely reactions of citizens with a common mental programming… …such reactions need not be found within the same individuals, but only statistically more often in the same society." (Hofstede & Hofstede 2005, p. 162)

During the period 1978 – 1983, Geert Hofstede conducted detailed employee interviews research within the IBM company across 53 countries that revealed patterns he ascribed to national culture (Marcus & Gould 2000, p. 35) and which Hofstede termed "dimensions of national culture" (Hofstede & Hofstede 2005, pp. 22-3). Trompenaars and Woolliams present seven dimensions of culture aimed at giving marketers insight into cultures (2004, pp. 50-1) while Hofstede et al. identify five dimensions of national culture (5-Ds). Hofstede et al. point out that there are several other models for the classification of culture and national culture and that while these other cultural classification models may use different terminology, their research data is strongly correlated to aspects of the data obtained from the IBM research (Hofstede & Hofstede 2005, pp. 31-3), a view that is supported by de Mooij based on statistical values of Hofstede's data (2004, pp. 30-2). The implication being that even though many different classification models exist, several of these models correlate to Hoftsede's dimensions and therefore offer similar insights into culture. These insights may simply be grouped or termed differently by other authors and theorists. While the issue of cultural classification and grouping may be open to debate, what is clear is that cultural differences based on nationality exist.

Marcus and Gould advise web "visualization designers" to "consider their own cultural orientation and to understand the preferred structures and processes of other cultures" (Marcus & Gould 2000, p. 34). Miletsky outlines a user-testing framework (2002, pp. 202-18) that can be used to evaluate a website which is based on both quantitative data and qualitative feedback and which provides a more complete picture of the user experience by testing the website on the specific audience (2002, p. 204) and then adjusting the design based on the audience feedback. There is general agreement amongst professional analysts and designers that well designed interfaces ultimately convert users to customers (Marcus & Gould 2000, p. 34) and therefore website user experience is important. Furthermore, the design of website user-interfaces is influenced by local cultural perspectives such as language and country (Ford & Kotzé 2005, p. 717) and therefore adaption of the design of a website interface, to suit a user from a particular culture, is important.

In website design, the term “internationalisation” refers to having a single website design that is used worldwide while “localisation” refers to designs that have been adapted to a specific locale (Nielsen 2000, p. 315). The practice of interface design that is cognisant of its users’ culture is referred to as localisation (Sun 2002 para. 1) and is achieved by adjusting the design of a website interface based on cultural factors. Barber & Badre present results of research that provide evidence of national localisation through the analyses of selected graphic elements and their prevalence within websites. These elements are termed “cultural markers” (Barber & Badre 1998, p. 2) and their research tabulates graphic elements (cultural markers) unique to particular nationalities and genres of websites – these include elements such as colour, spatial organisation, fonts, shapes and more (1998, pp. 2-3, 5-6) For the purposes of this research the term “culturally adaptive” will be used to describe visual communication within website user-interfaces that has been adapted to the cultural preferences of users in order improve the user experience.

The thesis of this research is to identify how it is possible to transcode cultural theory to visual communication (graphic design) by using Hofstede’s five dimensions model of national culture (5-D). To achieve this, firstly, Hofstede’s dimensions are introduced and secondly, literature that addresses transcoding and/or impact of cultural dimensions in website user-interfaces will be presented.

Models of culture

The problem with understanding another culture is that you are required to compare it to another culture, typically your own (de Mooij 1998, p. 64). This almost inevitably leads to bias and danger of stereotyping, but there is enough statistical evidence identifying patterns, trends and tendencies that can be attributed to a particular culture (Marcus & Gould 2000, p. 43). In order to organise cultural data metamodels of culture have been developed. Metamodels provide a broad view of philosophies and concepts of culture and one such metamodel is the Objective and Subjective Culture Model developed by Stuart Bennett described by Ford and Kotzé below:

> “Objective culture is the ‘institutions and artefacts of a culture, such as its economic system, social customs, political structures and processes, arts, crafts and literature’ [2, p 43]. Objective culture is visible, easy to examine, tangible, as it is represented in text orientation, date and number formats, colour and language [7]. In contrast, subjective culture is ‘the psychological features of a culture, including assumptions, values and patterns of thinking’ [2, p 43]. Subjective culture is difficult to examine because it operates outside of conscious awareness, for example, in the way people accept or reject uncertainty [1], similarities and differences in power and authority [1, 8], and the amount of emotions that people express when dealing with others [9].” (Bennett, cited in Ford & Kotzé 2005, p. 714)

Bennett makes the observation that objective culture is in fact abstract because “it is an externalisation of subjective culture”, but that it is seen as being more real than subjective culture, which is its source (Bennett, cited in Ford & Kotzé 2005, p. 715).

From metamodels of culture different models of culture have been developed that provide more detail about a culture by grouping data into cultural dimensions (Ford & Kotzé 2005, p. 715). The cultural theories of Hall, Victor, Kluckhohn and Strodtbeck, Trompenaars as well as Hofstede are commonly cited in organisational, business or marketing papers and publications. Below is a table with data from Ford and Kotzé in which four models of culture described:

Table 1. Cultural models and their dimensions

Victor	**Hall**
Language	Speed of Messages
Environment and Technology	Context
Social Organisation	Space
Contexting	Time
Authority Conception	Information Flow
Nonverbal Behaviour	Action Chains
Temporal Conception	
Trompenaars	**Hofstede**
Universalism vs. Particularism	Power Distance
Neutral or Emotional	Masculinity versus Femininity
Individualism vs. Collectivism	Individualism vs. Collectivism
Specific vs. Diffuse	Uncertainty Avoidance
Achievement vs. Ascription	Time Orientation
Time	
Environment	

(Hoft, Victor, Hall, Trompenaars, Hofstede, cited in Ford & Kotzé 2005, p. 715)

In the literature, Hofstede's model appears to be preferred as a basis for analyses and argument in cross-cultural communication (de Mooij 1998, 2004; Ford & Kotzé 2005; Hermeking 2005; Marcus & Gould 2000). Hofstede is also commonly cited in papers dealing with culture and web interface design and this may be attributed to the simplicity of his 5-D model as well as the statistical validity due to the size of the study that produced the data for the model and that his data has been independently tested for accuracy outside of the IBM environment (de Mooij 2004, p. 36; Hofstede & Hofstede 2005, p. 26). Furthermore there is country specific data available for 87 countries (Hofstede & Hofstede 2005, p. 27). This research focuses on Hofstede's model of national culture based on these factors.

Understanding Hofstede's model of national culture

Hofstede views culture as collective mental programming where each individual carries patterns of thinking, feeling and action, most of which has been acquired in childhood (Hofstede 1991, p. 4). He goes on to say that culture "is always a collective phenomenon" because it is shared in a social group and furthermore, that it is derived from the social environment which implies that culture is learned and not inherited (Hofstede 1991, p. 5). Figure 1 illustrates Hofstede's view of mental programming.

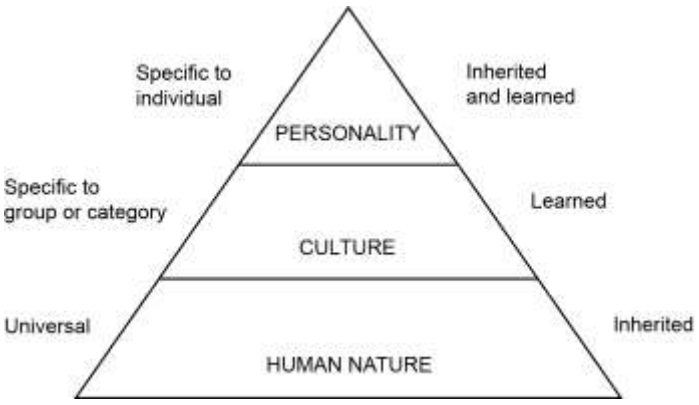

Figure 1. Three levels of uniqueness in human mental programming (Hofstede 1991, p. 6).

Hofstede maintains that cultural differences manifest in different ways, but that symbols, heroes, rituals and values can be used to describe manifestations of culture (Hofstede 1991, p. 7). Figure 2 below illustrates these four manifestations within culture and shows that 'values' are seen as a core manifestation.

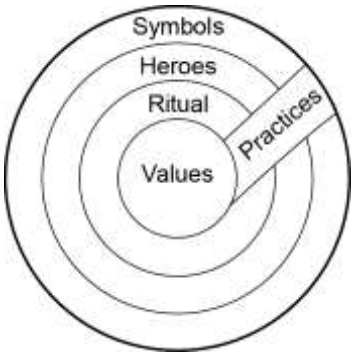

Figure 2. The 'onion diagram': manifestations of culture at different levels of depth (Hofstede 1991, p. 9).

Symbols are considered by Hofstede to be the most superficial manifestation of culture and are therefore placed in the outermost layer of the 'onion' in Figure 2. There superficiality is attributed to the fact that symbols such as words, images or objects appear and disappear over time and are often copied by other cultures (Hofstede & Hofstede 2005, p. 6). Consumer brands such as Coca-Cola also fall into this category (Hofstede 1991, p. 7).

Heroes are people who are dead, alive or fictitious such as Superman in the United States or Nelson Mandela in South Africa, who serve as models for behaviour (Hofstede & Hofstede 2005, p. 7).

Rituals are collective activities that are deemed to be socially essential such as ways of greeting, use of language, social interactions and religion (Hofstede & Hofstede 2005, p. 8).

Practices subsumes the symbols, heroes and rituals categories because their cultural meaning is invisible to outsiders but visible to insiders (Hofstede & Hofstede 2005, p. 8).

Values form the core of culture and are learnt within the first twelve years and these represent "tendencies to prefer certain states of affairs over others" (Hofstede & Hofstede 2005, p. 8). Values are intangible emotions and feelings which are often unconscious and can only be inferred by the way people act under certain conditions (Hofstede 1991, p. 8). Values are represented on opposites ends of a scale and determine how "good and bad" are defined (Trompenaars 1993, p. 23), for example:

Evil vs Good
Dirty vs Clean
Dangerous vs Safe
Forbbiden vs Permitted
Irrational vs Rational
(Hofstede & Hofstede 2005, p. 8)

If values are at the core of culture as Hofstede postulates, then measurement of such values becomes an important factor in attempting to understand or compare particular cultures. Hofstede conducted his research using questionnaires which, by his own admission are not a perfect instrument of measurement because there is a distinction between "the desirable and the desired: how people think the world ought to be versus what people want for themselves." (2005, p. 21). "Values and norms" are often used indiscriminately, but "norms are the mutual sense a group has of what is "right" and "wrong"." (Trompenaars 1993, p. 22) or as Hofstede states they are absolute standards for behaviour which are ethically right (desirable) (Hofstede & Hofstede 2005, p. 21). Hostede's dimensions aid the understanding of basic value differences between national cultures (de Mooij 2004, p. 33).

Dimensions of national cultures

Hofstede acknowledges that using a passport is not a logical way research cultural differences because nations are not necessarily the same as societies and geographic boundaries do not always coincide with cultural dividing lines, but nationality makes data collection expedient (Hofstede & Hofstede 2005, pp. 18-9).

Hofstede's dimensions are each scored on a statistical index of 0 – 100 where a 100 value indicates a strong tendency in that dimension. As seen in Table 1 Hofstede named his five dimensions:

1. Power Distance
2. Individualism vs. Collectivism
3. Masculinity versus Femininity
4. Uncertainty Avoidance
5. Long Term Orientation

Each dimension is briefly described below and then, in the following section, their application, based on the literature, is investigated in the context of website user interface design.

Power Distance (PD)

By Hofstede's definition PD deals primarily with inequalities in a society and how that society views and deals with them (Hofstede & Hofstede 2005, p. 40). Differences in social status and wealth and attitude to authority are factors that make up this dimension and the dimension essentially expresses dependence relationships within society and in low scoring PD there is a consultative approach where there is low dependence by subordinates on bosses (authority) (2005, pp. 45-6). Hofstede contrasts the differences in PD values in the context of family, school workplace and state (2005, pp. 52-62). For example, in family, high power distance situations typically require children to be obedient, there is often a hierarchy of authority and respect is virtuous, by contrast, in low PD situations children are considered equals from a young age, experimentation is encouraged, children may contradict elders and parents aim to develop independence in their children (Hofstede & Hofstede 2005, pp. 51-2) In high scoring PD cultures social position is demonstrated and elders are respected while in low PD cultures social status is played down and the elderly try to look younger (de Mooij 2004, p. 34).

Individuality versus Collectivism (IDV)

In individualistic cultures values are within each individual and they desire differentiation from each other while in collectivist cultures social networks define identity (de Mooij 2004, p. 34). In collectivist cultures family is extended outside of parents and siblings and children grow up in a "we" group which serves as the major source of their identity (Hofstede & Hofstede 2005, p. 75). Individualists, by contrast, look after themselves and immediate family only, they value personal time, material reward, personal opinion and honesty (Ford & Kotzé 2005, p. 716) and the purpose of educating a child is to ensure independence and children are expected leave home as soon as independence is achieved (Hofstede & Hofstede 2005, p. 75).

Masculinity versus Femininity (MAS)

Hofstede's rationale for the name of this dimension is based on the fact that males and females scored consistently differently but the dimension relates to social roles, not gender, and emphasises emotion (2005, pp. 119-20). Hofstede points out that biology plays a small part in how gender roles are differentiated because boys and girls learn their role in society through socialisation (2005, p. 128), where for example in masculine cultures, girls cry and boys do not and boys should fight back and girls should not fight at all whereas in feminine cultures (low MAS) boys and girls can cry and neither should fight (2005, p. 132). De Mooij suggests an alternative description for the dimension, namely "Tough vs Tender" (2004, p. 34). In feminine cultures males can occupy female jobs without emasculation (de Mooij 2004, p. 35). In cultures with high MAS scores males should be assertive, competitive and tough and strive for recognition and higher financial reward while females should focus on home and be concerned with quality of life (Ford & Kotzé 2005, p. 716). Hofstede defines a feminine culture as a society where "emotional gender roles overlap: both men and women are supposed to be modest, tender and concerned with quality of life" (2005, p. 120).

Uncertainty Avoidance (UA)

This dimension deals with the way in which a culture deals with ambiguity or uncertainty and it is, in essence, a subjective feeling which in some cultures is shared amongst other members (Hofstede & Hofstede 2005, pp. 163-4). Hofstede states that UA and risk avoidance are not the same thing because risk is generally attributed to a specific event and its probability is often measured in percentage terms whereas uncertainty is a diffuse feeling with no numeric value (2005, p. 172). He goes on to state that uncertainty avoidance has the effect of reducing ambiguity and that high scoring UA cultures look for structure in their institutions and relationships and paradoxically they may take risks in order to reduce ambiguity (2005, p. 172).

Long Term Orientation (LTO)

The LTO dimension incorporates Confucian principles and accordingly Asian cultures have high LTO scores and Western cultures score low (de Mooij 2004, pp. 35-6). LTO is orientated toward virtues that yield future rewards such as perseverance and thrift and conversely, short-term orientation fosters virtues relating to past and present such as respect for tradition, "face" and social obligation (Hofstede & Hofstede 2005, p. 210). In short-term orientated cultures members are concerned with past and present and believe in equality of relationships and they emphasise individualism whereas high LTO cultures are concerned with the future, believe that unequal relations lead to a stable society, males hold more authority than females and education and hard work are valued (Ford & Kotzé 2005, p. 716).

Transcoding culture in website user-interface design

Transcoding is defined in dictionaries as the conversion of (language or information) from one form of coded presentation to another. In the context of this research there are three possible coded presentations. Firstly, culture which is coded and presented here in dimensions of culture. Secondly, the design of the website user-interface (UI) which is presented as visual communication in the form of typography, images, graphics, colour and more. Thirdly, computer code such as HTML, PHP and CSS which are required in order to display the visual communication within website UIs. The scope of this research is limited to issues informing the transcoding of

models of culture, in this case Hofstede's dimensions, to visual communication presentations in the context of website UIs.

The literature reveals surprisingly limited research on the relationship between culture and visual communication and design within website UIs and no texts authored by graphic designers could be identified. However, there is a substantial body of research on the role/impact of culture within human-computer interaction in general, including website UIs.

Barber and Badre coined the term "Culturability" based on research that identified culturally specific elements in websites, referred to as "cultural markers", which they believe impact user performance and usability (1998 para. 1,7). The culturability research is not based on cultural models, but is enlightening in the visual communication context because it documents the prevalence of graphic symbols/metaphors, colours, fonts, alignment, grouping, asymmetry and more, based on nationality of websites (Barber & Badre 1998). Marcus and Gould (2000) published guidelines, derived from Hofstede's cultural dimensions, for application in the design of website UIs. The guidelines provide no specific information regarding symbols, colours, navigation, images etc., but they do provide a possible framework for transcoding Hofstede's 5-Ds into UIs. The application of the guidelines, by designers, is intended to result in culturally adaptive website UI design that improves the website user experience.

Tables 2.1 – 2.5 tabulate the guidelines proposed by Marcus and Gould (2000) in addition, relevant elements and principles of visual communication and design are proposed by this researcher which may be applied within the process of transcoding the 5-D model to visual design presentations. The list of elements and principles is not intended to be exhaustive, nor have they been tested and they serve only to illustrate how the theoretical guidelines might actually be applied in the visual design process.

Table 2.1. Marcus and Gould's guidelines for the dimension Power Distance and their possible relevance within website user-interface design.

Dimension: Power Distance (PD)	
***Guideline (High to Low)**	**Relevant elements and principles of design**
Access to information:	
Highly structured vs Less structured	*Site navigation, grid/layout, colour palette (multi-monotone), use of 'white' space, font selection*
Symbols of social/moral order:	
Significant/frequent vs minor/infrequent use	*Symbols such as flags or religious symbols, colour palette*
Focus on experts, authority, certificates, official stamps:	
Strong vs weak	*Image selection, graphics/symbols that convey importance, information emphasis, visual hierarchy and sequence of content in layouts*
Prominence given to:	
Leaders vs citizens, employees or customers	*Image selection, visual hierarchy and sequence of content*

Importance of security/restrictions or barriers to access:	
Explicit/enforced vs transparent, integrated, freedom to roam	*Site navigation, grid/layout, colour to define areas, visual prominence of login, hierarchy and sequence of content in layouts*
Explicitness of social roles:	
Manager vs non-manager	*Image selection, site navigation, grid/layout, colour to define areas, visual prominence of restricted area, hierarchy and sequence of content in layouts*

*(2000, p. 36)

Table 2.2. Marcus and Gould's guidelines for the dimension Individualism versus Collectivism and their possible relevance within website user-interface design.

Dimension: Individualism vs Collectivism (IDV)	
***Guideline (High to Low)**	**Relevant elements and principles of design**
Motivation based on personal achievement:	
Maximised vs underplayed	*Image selection (e.g. individual success or group achievement), visual hierarchy and sequence of content in layouts*
Images of success:	
Materialism/consumerism vs achievement of socio-political agendas	*Image selection (e.g. individual success or social achievement)*
Rhetorical style:	
Argumentative/extreme claims vs official slogans, subdued hyperbole and controversy	*Headlines and copy, colour palette, image selection*
Prominence given to:	
Youth and action vs aged, experience, wisdom	*Images selection (people), font selection, layout/grid, colour palette, overall style and tone*
Importance given to:	
Individuals vs individual products or products with groups	*Image selection, hierarchy, visual grouping (gestalt principles)*
Underlying sense of social morality:	*Image selection, hierarchy, visual grouping (gestalt principles), symbols of morality (e.g. religion)*
Emphasis on truth vs relationships	

Personal information:	
Willingness to provide personal information vs protection of data differentiating individual from group	*Structure of forms for data collection*

*(2000, pp. 37-8)

Table 2.3. Marcus and Gould's guidelines for the dimension Masculinity versus Femininity and their possible relevance within website user-interface design.

Dimension: Masculinity vs Femininity (MAS)	
***Guideline (Masculinity)**	**Relevant elements and principles of design**
Traditional distinctions:	
Gender/family/age	*Image selection, visual hierarchy and sequence of content in layouts*
Focus on:	
Work tasks, roles and mastery, quick results for limited tasks	*Navigation, visual hierarchy and sequence of content in layouts*
Navigation:	
Oriented to exploration and control	*Navigation, information design, visual hierarchy and sequence of content in layouts*
Attention:	
Gained through games/competitions	*Layout - prominence given to competition/games*
Graphics, sound, animation:	
For utilitarian purposes	*Information design, colour palette, symbols, animations*
Underlying sense of social morality:	
Emphasis on truth vs relationships	*Image selection, hierarchy, visual grouping (gestalt principles), symbols of morality (e.g. religion)*
Personal information:	
Willingness to provide personal information vs protection of data differentiating individual from group	*Structure of forms for data collection, a mechanism to convey importance or information emphasis*

*Guideline (Femininity)	Relevant elements and principles of design
Gender roles:	
Blurring of roles	*Image selection*
Cooperation:	
Mutual cooperation, exchange and support	*Site structure incorporates forums, blogs social platforms/tools, image selection, layout*
Attention:	
Poetry, visual aesthetics and appeals to unify values	*Style and tone of visuals and content, visual emphasis of appeals*

*(Marcus & Gould 2000, p. 39)

Table 2.4. Marcus and Gould's guidelines for the dimension Uncertainty Avoidance and their possible relevance within website user-interface design.

Dimension: Uncertainty Avoidance (UA)	
***Guideline (High UA)**	**Relevant elements and principles of design**
Simplicity:	
Clear metaphors, restricted volumes of data	*Image selection, site navigation, grid/layout, colour palette (multi- monotone), use of 'white' space, font selection, limit data presentation*
Information:	
Reveal/forecast results implications of actions before users act	*Unambiguous navigation, visual hierarchy and sequence of content in layouts*
Navigation:	
Prevent users from becoming lost	*Unambiguous navigation, information design, colour palette, visual hierarchy and sequence of content in layouts, inclusion of navigational aids e.g. breadcrumbs*
Mental models:	
Help systems that reduce user errors	*Prominence given to help menus/content, navigation, information design, colour palette, visual hierarchy and sequence of content in layouts*

Redundant cues:	
Colour, typography, sound to reduce ambiguity	*Navigation, information design, colour palette, type selection, headlines and copy, symbols e.g. microphone or speaker*
***Guideline (Low UA)**	**Relevant elements and principles of design**
Complexity:	
Maximal content and choice	*Image selection, site navigation with sub menus, multi-grid system, colour palette, font selection, visual hierarchy and sequence of content in layouts*
Risk:	
Encourage wandering and risk, stigmatise over protection	*Site structure incorporates forums, blogs social platforms/tools, image selection, layout*
Navigation:	
Less control over navigation	*Navigation more ambiguous*
Mental models:	
Mental models and help systems focussed on understanding concepts rather than narrow tasks	*Content of help systems and general site content*
Non-redundant cues:	
Colour, typography and sound used to maximise information, multiple links with no redundancy	*Discard redundant content or navigation, image selection, site navigation with sub menus, in-text links, multi-grid system, colour palette*

*(2000, p. 41)

Table 2.5. Marcus and Gould's guidelines for the dimension Long Term Orientation and their possible relevance within website user-interface design.

Dimension: Long Term Orientation (LTO)	
***Guideline (High LTO)**	**Relevance to visual communication and design**
Content focus on:	
Practical value and practice	*Image selection, information design, grid/layout, headlines and copy*

Relationships:	
As source of information and credibility	*Image selection, use of symbols, contact information*
Patience:	
Patience in achieving results and goals	*Sequence of content in layouts*
***Guideline (Low LTO (Short Term))**	**Relevance to visual communication and design**
Content focus on:	
Truth and certainty of beliefs	*Image selection, use of symbols (belief), style and tone of content*
Rules:	
Rules as source of information and credibility	*Emphasis of content containing rules, information value of rules in content, hierarchy of content types*
Immediacy:	
Desire for immediate results and achievement of goals	*Sequence of content in layouts, site navigation, grid/layout*

*(2000, p. 43)

From the tables above it would appear that Hofstede's model of national culture may be transcoded to visual design presentations within website UI design contexts. Ford and Kotzé (2005) have empirically tested aspects of Hofstede's dimensions, based on the guidelines of Marcus and Gould, within website UIs with mixed results that require further research. However, they refer to data from a previous study that shows that the application of dimensions appears to have a positive effect on users regardless of their culture profile (Ford & Kotzé 2005, p. 724).

Conclusion

This research has interrogated culture through the lens of Hofstede's model of national culture in order to ascertain its value to the design of culturally adaptive website user-interfaces. The literature reveals that Hofstede's model is used within culturally adaptive user-interface development in the field of human-computer interaction. Guidelines that attempt to interpret Hofstede's 5-D model in a website user-interface context exist and have been tested empirically in part. It would appear, based on the literature, that it may be possible to develop a model, made up of elements and principles of visual communication and design, that could aid designers in transcoding models of culture into visual presentations. However, further research is required to develop such a model and to validate its application within cross-cultural visual communication.

This research exposes the fact that there is limited literature addressing the application of Hofstede's model within a visual communication and design context. Furthermore, it would appear, from the literature, that no graphic designers are involved in research that interrogates cross-cultural communication in a website user-interface context. In an increasingly global village that is be rapidly moving from printed communication to screen-based communication, it is imperative that graphic designers engage with the implications of cross-

cultural visual communication and design if they hope to remain relevant within the website and digital communication landscape.

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TOWARDS AN ENTREPRENEURIALLY ORIENTATED DESIGN PROCESS FOR THE SOUTH AFRICAN SMALL BUSINESS THAT PROVIDES CUSTOM-MADE APPAREL

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Abstract

The South African government has invested in skills development ever since 1995 in an effort to facilitate more opportunities for small business and micro business (SMME) owners. Skills development programs offered in South Africa include the development of technical skills like apparel construction. At least 129 active apparel SMMEs were operating in the Pretoria region of Gauteng province during between 2001 and 2013. Most of these SMMEs provide custom-made apparel for their individual customers and the owner-designers of these businesses are involved in the design process of the custom-made apparel, but also play an imperative role in the business functions that directly relate to the design process.

Unfortunately, small businesses in South Africa have poor sustainability. The number of SME failures in South Africa varies between 50 and 95% within the first five years. One of the contributing factors to business sustainability is the entrepreneurial orientation of the business or behavior yielded as a result of the entrepreneurial orientation of the owner of the business. Entrepreneurial orientation enhances creativity and innovation which is typically associated with design actions. Nevertheless, it is also associated with a competitive business advantage.

The question remains: how does entrepreneurial orientation manifest in the context of a small business that applies the apparel design process to custom-made apparel? Therefore, a larger study aimed to develop an entrepreneurially orientated-design process for a business that provides custom-made apparel. As part of the larger study, this paper reports on a qualitative approach implemented to explore and describe the design processes of a selected small business in Pretoria.

The findings showed that one of the cases in this study had an entrepreneurially orientated design process. The specific case that was more entrepreneurially orientated that the other two cases. Entrepreneurial orientation in the context of this study includes: risk taking, innovation and fashion leadership.
Keywords*: Entrepreneurial orientation, Custom-Made Apparel; Design; Small and Medium Enterprises*

Introduction

The number of small and micro business (SMME) failures in South Africa varies between 50 and 95% within the first five years (Willemse 2010). Business sustainability as well as competitive advantage has been linked to the entrepreneurial orientation of the business (Covin & Lumkin 2011; Wei, Bin, & Gan 2010). Entrepreneurial ventures as opposed to general SMMEs contribute to economic change (Fatoki & Garwe 2010). This entrepreneurial orientation facilitates business owners to grow business beyond inflation enabling the SMME ventures to thrive in the long run (Mwobobia 2012). Wales, Mansen and Mckelvie (2011) state that there can be different degrees of entrepreneurial orientation within a business and that it manifests in the behaviour of

the business through the business owner's application of specific skills. Entrepreneurially orientated behaviour includes innovativeness, pro-activeness and risk taking (Slevin & Terjesen 2011).

Entrepreneurial orientation can be applied in an existing business and does not necessarily involve the start-up of a business (Neneh & Van Zyl 2012). Entrepreneurial orientation can therefore also be linked to strategy applied or management of a business (Ruyan et al. 2011). The owner of an SMME can therefore apply entrepreneurial and business skills to become more entrepreneurially orientated. There is consensus that the entrepreneurial orientation of a business owner requires skills like creativity and innovation (Nieman & Nieuwenhuizen 2009, p. 60; Praag & Versloot 2007; Brown & Ulijn 2004, p. 3). Creativity and innovation can be applied in any business for example an SMME that designs and manufactures apparel.

This paper focuses on the design process applicable to apparel design SMME's in order to be more entrepreneurially orientated. The argument is that not all apparel designers that own a business are entrepreneurial, but that an entrepreneurial orientation could be constructive to the business's competiveness and consequently the business sustainability.

Literature review

South African apparel design and manufacturing SMMEs

The South African apparel and textile industry performs a wide range of manufacturing activities. The boundaries of this industry have not are not always clearly defined. Naumann (2002) have attempted to delineate the clothing and textile industry as an industry that manufactures menswear, womenswear, workwear, underwear, hats and fur and leather clothes. Many of this manufacturing apparel SMME's are less sophisticated cut measure and trim (CMT) businesses (Vlok, 2006). These apparel SMME's manufacture apparel by means of designing and constructing the garments from concept to customer. This process of manufacturing creates an opportunity for owner-designers to custom-make apparel according to client specifications and requirements.

Apparel owner-designers that offer custom-made apparel products to their private clients typically require their clients to pay a percentage of the cost when the client places the order (to cover materials used) and the final balance is requested when the apparel product is complete (Burke, 2008: 98). These custom-made products are made-to measure and the main competitive advantages for this business are often the exclusivity of the apparel (Bickle, 2011:57).

Processes applicable to apparel design

The apparel design process is in essence a creative process and requires the application of creative problem solving (Hodges & Karpova 2010). Design in general is defined as a process where elements or components are combined into a cohesive whole, in a creative manner, to change an existing situation into a preferred one (Boztepe 2007; Miller et al. 2005 p.55). Rath, et al. (2008 p. 5) state that design entails a great deal of pre-production planning before implementation (production) takes place. Apparel design in particular is "a process that utilises the design elements of line, colour, texture, pattern, silhouette, and shape to create a garment." (Keiser & Garner 2008 p. 238). Therefore design in this study refers to the creative actions taken in planning the custom-made apparel-concept as well as the implementation of that planning. With regard to application of creativity, apparel SMME owner-designers possibly have an advantage with regard to entrepreneurial orientation.

A comparison between different theoretical design processes as creative processes is provided in the following table.

	Common design action in apparel design (Au, *et al*., 2004)	**Engineering design process applied to apparel design (Regan, *et al.*, 1997)**	**Apparel Design process of Lamb & Kallal, 1992)**	**Universal Design process of Aspelund (2010)**
Pre-production Planning	**Analysis**			**1 Inspiration** (motivation for the problem)
		1 Problem recognition (a) Problem statement (b) Creation of ideas (c) Solution generation	**1 Identification of problem** (functional, expressive and aesthetic dimensions of customer needs)	**2 Identification of the design problem** (Needs and constraints analysis of the problem)
		2 Problem definition (a) Objectives (b) Resources (c) Design boundaries (d) Sub problem		
	Synthesises	**3 Exploration of problem** (a) Information search (b) Assumptions (c) Design strategy (d) Market assessment (e) Objectives (f) Cost	**2 Preliminary ideas** (creativity: technical sketching, brainstorming, research, survey question and answer sessions)	**3 Conceptualisation** (brainstorming, presenting analogies, questioning, sketching)
		4 Search for alternatives (a) experience (b) Answers (c) Requirements (d) Design proposal	**3 Design refinement**	**4 Exploration of ideas** (that might solve the problem)
		5 Evaluation and decisions (a) Outcomes (b) Feasibility (c)evaluation		
		6 Specification of solution (a) Analysis	**4 Prototype development**	**5 Definition/ modelling**

	Common design action in apparel design (Au, *et al.*, 2004)	Engineering design process applied to apparel design (Regan, *et al.*, 1997)	Apparel Design process of Lamb & Kallal, 1992)	Universal Design process of Aspelund (2010)
	Evaluation	**7 Communication of solution** (a) Verbal (b) Visual (c) Approval	**5 Evaluation** (functional, expressive and aesthetic needs of apparel play a role	**6 Communication**
Production	**Implementation**		**6 Implementation**	

Table 1: A comparison between creative processes applicable to apparel design

The existing apparel design models illustrated in the above table fall short in illustrating how the designer's role as a business owner is incorporated in to the design actions. Furthermore, application of design skills, interwoven with the business processes that support optimization of design outputs, are unclear from the literature. Since design thinking is becoming a popular methodology with regard to innovation (application of creativity) in the businesses environment (Brown 2008), the creativity relating to design might also be applied in a business context. The application of creativity to a business environment could potentially yield entrepreneurial behavior. The manifestation of this behavior in the specific context of this study is however, unclear.

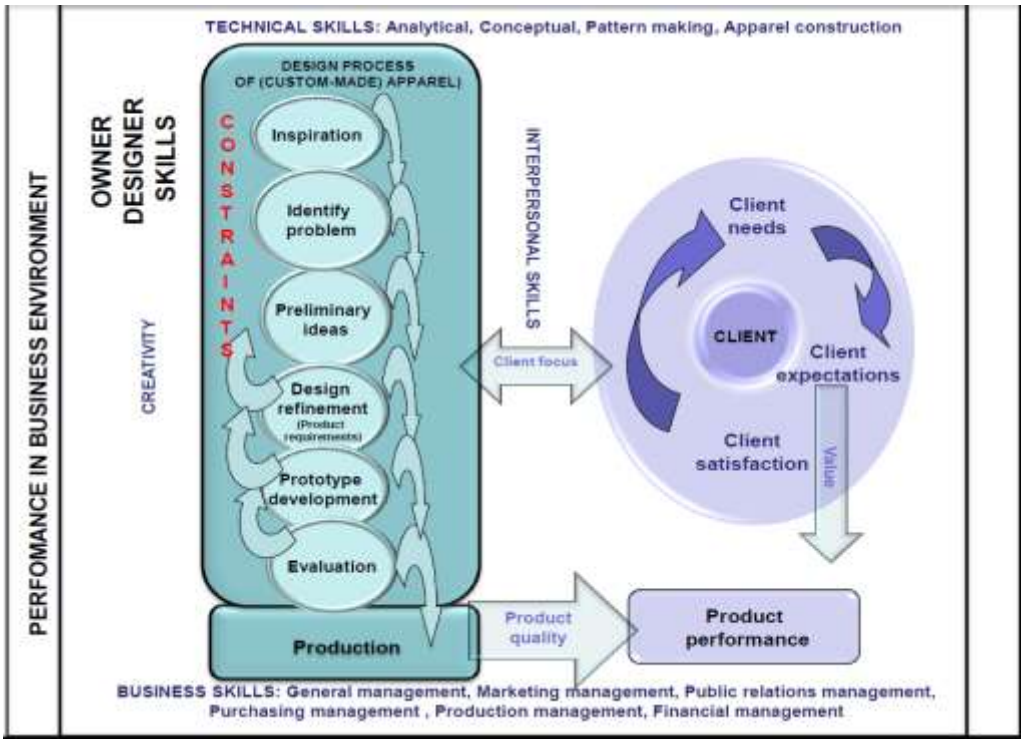

Figure 1: Conceptual framework

Only a section of the first phase of a larger study is addressed in this paper. The role of creativity and interpersonal skills in the design process, but also with regard to the business environment is illustrated as skills that enable value creation for clients of custom-made apparel. With the background and theory in mind, the aim of a larger multi-phased study was to develop an entrepreneurially orientated design model for the

South African SMME that provides custom-made apparel. The aim of this paper is to report an entrepreneurially orientated design process applicable to custom-made apparel.

The objectives covered in this paper are:
Objective 1: To explore and describe design processes implemented by owner-designers of selected SMMEs in Pretoria (Gauteng Province).
Objective 2: To explore and describe possible entrepreneurially orientated behaviour (including application of skills) applied to the design process in selected SMMEs.

Methodology

Research design
The research design appropriate for this study was a case study research design. The researcher was interested in understanding events, actions and processes in their context which is referred to as contextual interest (Denscombe 2007, p. 35; Babbie & Mouton 2001, p. 272). In this regard a case study is an empirical enquiry that can be implemented to investigate a contemporary phenomenon in great detail within a real-life context (Yin 2008, p. 18). The actions (events) and processes in three cases were described and appreciated in the natural context that they occurred. More specifically small businesses that provide custom-made apparel were explored in Pretoria (Gauteng Province).

The cases in this study were selected according to the classification provided by Denscombe (2008, p. 40). According to this classification an extreme instance, typical instance and most unlikely case can be selected especially for theory building purposes. In order to select what a typical case, extreme case and least likely (marginal case) entailed, the researcher first compiled a comprehensive list containing information and names of 129 active small businesses that provide custom-made apparel in Pretoria. Specific criteria were determined for each category (typical, extreme and least likely cases). The criteria for the cases are provided in table 2:

CASE TYPE	CODE NAME	CRITERIA FOR THE CASE
Typical	**Case A**	1) Full time business 2) Provides custom-made apparel (all types of apparel including every-day wear as well as special occasion wear) 3) Drafts all patterns 4) Owner is the designer. 5) Employs at least one other person (seamstresses) and/or contractors
Extreme	**Case B**	1) Full time business 2) Provides only exclusive occasion wear 3) Drafts all patterns 4) Owner is the designer 5) Employs at least three people 6) Have been operating for at least four years 7) Prominent in the media 8) More than one branch
Marginal	**Case C**	1) Part-time business 2) Owner is the designer 3) Drafts patterns but also alters commercial patterns 4) Have been operating for at least four years 5) Employs no people, no sub-contracting

Table 2: Criteria for the selected cases

An additional criterion for the selected cases was that the business had to operate for at least five years, since the larger study also addressed the sustainability of the cases.

Research methods

Multiple research methods were implemented in this study: semi-structured interviews with owner-designers of the selected cases, participant observation and visual analysis of custom-made apparel designed and produced by the selected small businesses. Data was documented and a preliminary analysis was done after each data gathering session. Data analysis was done mainly following guidelines provided by Leedy and Omrod (2005, p. 136). The data analysis involved: 1) the processing of contextual information on every case, 2) creation of initial categories in tables according to the conceptual framework and interview schedule 3) reading data sources repeatedly in order to make sense of the patterns and themes/categories that emerged for each case, 4) coordination of the categories ad sub-categories in the different cases 5) recording and translation of findings into a revised conceptual framework which was verified by theory.

Findings

Findings on the design process applied in the selected cases

The findings regarding the categories applicable to design processes of the selected cases are presented in Table 3.

Case A (Typical case)		**Case B (Extreme case)**		**Case C (Marginal case)**	
Category	Sub-Category	Category	Sub-category	Category	Sub-category
		Analysis of fashion trends and mentors	Inspiration		
Analysis of client	Consultation (Client needs: occasion and figure type)	Analysis of client	Consultation (Client needs: figure type and clothing personality)	Analysis of client	Consultation (Client needs: preferences and figure type)
Synthesis	Client ideas, (sketch), measurements, product costs labour and client budget	Synthesis and evaluation	Preliminary sketching (initial idea of client)	Synthesis	Client ideas (Sketches) and technical aspects
	Fabric selection to suit garment concept	Refining garment concept	Fabric selection and refining sketch		Fabric selection to suit design concept
First Implementation	Prototype evaluation	First Implementation	Prototype evaluation	First Implementation	Prototype evaluation
Implementation	Cut and sew (designer & seamstress)	Implementation	Cut and sew basic garment (production team)	Implementation	Cut and sew (designer)

Evaluation	Other fittings	Evaluation	Other fittings	Evaluation	Other fittings
Implementation	Finishing: Detail surface work	Implementation and evaluation	Detail work and top layers added. Starts on basic garment (canvas stage)(designer team collaborates) Final sketch is made as gift to client	Implementation	Fishing: Detail surface work

Table 3: Categories emerging from the various design processes of selected cases

The phases of theoretical design models and the marginal as well as typical case correspond. However, the extreme case uses a different analysis technique where the inspiration for the custom-made garment is drawn not only from client needs, but also from the client's clothing personality. The conclusion drawn is that skills to classify clients can be an additional technical skill applicable to the design process.

Findings also suggest that the synthesis of ideas and materials are only used as a starting point and the sketch is not finalised until the actual garment is complete. The product specifications are not finalised during the pre-production phase as other cases do. This challenges the theory that stipulates that progression should be made during a design process towards the product-concept which is the final stage before implementation/production (Mitchka et al. 2009). The garment concept is therefore flexible and subjected to some changes later in the design process. A more flexible thinking style has been associated with application of creative skills in design (Meneely & Portillo 2005). The conclusion is drawn that there is evidence of flexible thinking in the application of the extreme case's design process as opposed to thinking styles that are more entrenched in the other cases. Moreover, flexibility or ability to apply flexible thinking has been linked to competitive business advantage (Wei et al. 2010).

A collaborative design process was the other difference between the extreme case and the other cases. The main evidence of the collaborative design model is provided in Table 4:

Verbatim	P3 "Do you know, I think we have accomplished what we have because we are a team. Because the entire time we have a dress on a doll we walk past and this one will comment. I feel comfortable to ask Designer 3 and Designer 1 what they think of this. Then they will say ja, ok…" P1 "…that is why I don't understand how designers can work on their own. It is really important that they (pointing to other designers) also see." P1 "… the designs evolve as we go on. You'll have the fabric and then add something here and we add other stuff. It is done on the dress. It is different than what we started with, but it is always an improvement."

Participant observation	Observation: The basic garments (referred to as "canvasses") are displayed on fit mannequins and all the designers comment on what the dress "needs" or what is working or what is not "working". Music is playing in the large open design area where the clients also fit. All the designers work her simultaneously commenting on each other's work. The clients that walk in also get to see the creative process in action. With the dress on a figure form, designer 2 starts to add draping and lace detail until the look he wants and the look the other two designers' approve is obtained. He sews the added pieces by hand (with four threads) and often re-creates his initial idea. He is busy creating an evening dress and drapes fabric in an artistic manner over the dress. He frequently steps back to appraise the garment from a distance. Owner-designer 1 also steps back and comments on the length of the fabric that is different on the one side and Owner-designer 2 fixes this. He works with precision to please designer 1, but also talks about what the client would like with regard to her personality. She is apparently less dramatic and more romantic. Owner-designer 3 asks for owner-designer 2's advice on a fascinator that she is creating. Owner-designer 3 also advises owner-designer 3 on how she can perhaps design the fascinator to be more commercial, so that a wider market will appreciate it. She is encouraged to do more items in that range.
Visual analysis	Visual analysis: Garments are innovative in the sense that lace is never used as it is. It is re-engineered. Furthermore the garments all challenge the boundaries with regard to what is traditionally acceptable. For example garments have frayed hems or instead of a rolled hem the garments are finished with a soldering iron or candle. Moreover new methods for fasteners are developed.

Table 4: Evidence that illustrates the collaborative design process of the extreme case

It was apparent that in the collaborative apparel design process, there is one designer who is always encouraging and leading the design team (other two members). This "leader" is the designer with the most experience, but he never makes the final decision which implies that he only guides the process. Therefore it seems that this leader takes on a role as mentor. Nevertheless, the mentor can also guide the other designers with regard to business processes (for example marketing) that interlink with the design process. The phenomenon applicable to this situation seems to be collective creativity.

The theory of Hargadon and Bechky (2006) explains the phenomenon of collective creativity. The collaboration (between designers) enhances the chances for creativity through: 1) help seeking, 2) help giving, 3) reflective reframing and 4) reinforcing. According to these scholars, help seeking involves that an individual in a group seeks for help from the others, help giving entails that there is a willing devotion of time and attention to assist a group member, reflective reframing involves the mindful behaviour of all participants in a group interaction and finally reinforcing involves any interesting solutions that he group might have come up with. In view of these actions the interaction is all about pooling resources, ideas and people. This theory can also be applied to the business environment.

Findings on the categories indication application of creativity that enhance entrepreneurial orientation are presented in Table 5:

Case A (Typical case)		**Case B (Extreme case)**		**Case C (Marginal case)**	
Category	Sub-Category	Category	Sub-Category	Category	Sub-Category
Business opportunities identified	Expansion of target market	Business opportunities identified	Expansion of target market Expansion of product and		

			service offerings		
		Overcoming marketing constraints	Applying social media and public relations to create a brand image		
Overcoming time constraints	Applying	Overcoming time constraints	Planning of new ranges in a designer group	Overcoming time constraints	Using photos of products in the making to get client approval on detail
		Overcoming Seasonality	Launching ready to wear range that can be customised		
Competing with Imports	Quality craftsmanship Providing value for money Exclusivity (unique products)	Competing with Imports	Quality craftsmanship Providing value for money Exclusivity (hand crafted and tailored fit) Fashion leadership through innovative apparel	Competing with Imports	Providing value for money Exclusivity (tailored fit)

Table 5: The application of creativity in the cases

From Table 5 it is apparent that creativity is applied to identify opportunities to grow the business. Creativity is also applied to overcome business constraints. It is however apparent that in the extreme case, innovative apparel and fashion leadership emerges through the application of creativity. In this regard, there was also evidence of risk taking in two cases.

The following table displays some evidence that supports the propensity to take risks in the extreme case that was more entrepreneurial than the other two cases:

Verbatim	P3 "It [doing things they are not familiar with] is a learning curve all the way."
Participant observation	Designer 2 and Designer 1 do not finalize the sketch of the garment until the garment is complete. They cut very expensive fabric without knowing exactly where or how they will apply it to the "canvas" (basic constructed garment). They do the same with lace that is costly and where they cannot afford to lose the lace to mistakes.
Field note	The extreme case has a ready-to wear range that is customized on the request of a potential client. This range incorporates the latest fashion trends and requires capital. There is however no guarantee that the range will sell out which makes it more risky to produce than custom-made apparel (produced on order only).

Table 6: Evidence of risk-taking in the extreme case

From Table 6 it is apparent that risks can be taken during the design process but also with regard to the business opportunities.

Conclusion

The first objective of this paper was to explore and describe design processes implemented by selected owner-designers of SMMEs in Pretoria (Gauteng Province). In this regard, the design process applied by all the cases had analysis, synthesis and evaluation phases before owner-designer teams applied their skills to implementation (actual construction). Nevertheless, the extreme case implemented a finishing phase (part of the implementation) which was open to re-interpretation of initial ideas. The practical implications were that designers often changed initial design concepts and used the basic garment (constructed garment of the basic silhouette) as a canvas. This artistic inclination in the design process is facilitated by the collaboration between designers. Flexibility was identified in two cases as a factor that contributes to creative ideas.

The second objective was to explore and describe possible entrepreneurially orientated behaviour applied to the design process in selected SMMEs.

The collaboration seems to be the key feature for innovative garments as opposed to re-creating or re-fining the client design-concept. Since innovation is crucial to entrepreneurial behavior it is concluded that the case that implements the collaborative design process is more entrepreneurially orientated than the other two cases. Additional evidence supports the manifestation of risk taking and fashion leadership in the design process (especially in the extreme case) to an extent that it puts the business in a more competitive position.

The implications of the findings is that the same creative thinking skills can be applied to the broader context of the designer's world (business) so that the designer can become more entrepreneurially orientated and grow the business. Entrepreneurial orientation in the context of this study includes: risk taking, innovation and fashion leadership.

Entrepreneurial orientation involves skills that might be developed best in a collaborative apparel design environment. Marginal and typical cases that do not have more than one owner-designer might consider a collaborative design process with other SMME's.

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SUPPORTING A COMMUNITY THROUGH DESIGN: MELVILLE, JOHANNESBURG

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Abstract

In 2012 the Melville Community Development Organisation (MCDO) approached the Department of Strategic Communications at the University of Johannesburg for a collaboration between the University and the Melville community, with the support of the Melville Residence Association (MRA). These Melville institutions requested groups of Honours students to research and propose a solution for the urban degeneration within the area, as perceived by its businesses, tourists and residents. After extensive research the majority of the Honours students in Strategic Communications recommended that Melville should follow in the footsteps of the Madibeng area and Braamfontein, both in Johannesburg's central business district, as well as other international examples like London's Camden Town and Overhoeks, Amsterdam, to design a brand for the area. The University of Johannesburg's Department of Graphic Design BTech class of 2013 was consequently approached to apply the research in the form of a brand for Melville.

From interviews with various stakeholders and interested parties within Melville, however, it became clear the community's more settled bohemian residents pride themselves on their individualism, and that they would not be open to one singular brand for their suburb. Their response correlated with a similar reaction in Hamburg, Germany, where residents openly rebelled against what they perceived as a brand that was enforced on their community without their approval (Beckman & Zenker 2012). The interviews also confirmed the theory of user experience design that socially responsible design should in practice not be about the designer, but rather about the experiences of the community utilising and viewing the designs.

The sixteen Graphic Design students were thus tasked with identifying an existing challenge or community initiative and its stakeholders, with the help of the MCDO and MRA. By supporting and strengthening, or creating new so-called sub-brands, the perceived 'umbrella' brand of Melville could potentially be strengthened. The end-goal of the project was implementable design solutions that could potentially boost tourism, bolster economic growth, encourage new residents to buy property and stimulate community participation. This paper reflects upon the challenges and complexities inherent in the task of urban regeneration through branding and presents several case studies of the Graphic Design students' design solutions, including how problems were perceived and conceptualised and how the designs were received by the Melville community and individual stakeholders.

In this paper I argue that communication design can be positioned as a discipline that can help solve problems within communities in impactful and innovative ways, if the community is allowed to be involved in the shaping of the project. By framing design projects as a problem-led praxis situated within and constrained by complex communities, students learn skills that allow them to enter the world as aware innovators who feel comfortable approaching communities to offer support through socially relevant and responsible design.
Keywords*: Communication design, branding, urban regeneration, Melville.*

Introduction

In 2012 the Melville Community Development Organisation (MCDO) approached the Department of Strategic Communications at the University of Johannesburg for a collaboration between the University and the Melville community, with the support of the Melville Residence Association (MRA). These Melville institutions requested groups of Honours students to research and propose a solution for the urban degeneration within the area, as perceived by its businesses, tourists and residents (Modiba 2012:1). Students were asked to find solutions to market and develop "the broader Melville community as an embracing, dynamic, diverse and progressive community, (...) preserve the heritage (including) history, architecture and natural resources(...) and to promote a vibrant and sustainable business community" (Lambert, Fortuin, Calteaux & Bezuidenhout 2012: 3).

After extensive research the majority of the Honours students in Strategic Communications recommended that Melville should follow in the footsteps of the Madibeng area and Braamfontein, both in Johannesburg's central business district, as well as other international examples like London's Camden Town and Overhoeks, Amsterdam, to design a destination or place brand for the area (Achary, Bvuma, Modiba & Schwartz 2012: 2).

Place or destination branding can be defined at "...(u)sing the qualities, images and, in most cases, stereotypes of the place and the people living in that place to (create a) brand" (Kavaratzis 2006: 2). According to Beckman and Zenker (2012:2) a place brand is a "... network of associations in the consumer's mind based on the visual, verbal and behavioural expression of a place, which is embodied through the aims, communication, values and general culture of the place's stakeholders..." The city "... takes its form, content and meaning in peoples' minds. People 'meet' and understand cities through accepting their own perceptions and processing those perceptions into their own understandable image of the city." This image created by both residents and visitors is similar to how consumers view products and companies, both managed through branding. By this reasoning "...in essence, people create brand associations with cities and evaluate these associations in the same way as they evaluate associations of other brands. In other words, people understand cities in the same way as they understand brands..." (Kavaratzis 2006: 1). By improving people's perceptions of Melville, and thus its brand, its economy could potentially be managed better and improved.

In the past few years there has been increased competition amongst international cities to attract funds, foreign investments, business relocations, tourists, and residents. As people, capital and knowledge are becoming less location-specific, developing places as brands helps promote an environment capable of attracting new activities and key groups (Konecnik-Ruzzier & Petek, 2013:45). The reputation of a destination thus needs to be attractive and relevant to a variety of target markets in order to attract new businesses, investors, residents, tourists etc. (Herstein, 2012:1). Melville has in recent years started facing more competition from surrounding areas like Parkhurst and Greenside for new business, tourists, nightlife and new residents (Lambert, Fortuin, Calteaux & Bezuidenhout 2012: 9-11).

On 11 January 2013 Rene Benecke from the Department of Strategic Communications, along with Marie-Lais Emond from the MCOD, approached the University of Johannesburg's Department of Graphic Design BTech class of 2013 to apply the research in the form of a place brand for Melville. From interviews with various stakeholders and interested parties within Melville, however, it became clear the community's more settled bohemian residents pride themselves on their individualism, and that they would not be open to one singular brand or logo for their suburb. Many of the 2012 Honours studies had specifically highlighted this level of individualism, as well as the more problematic lack of unity (Achary, Bvuma, Modiba & Schwartz 2012: 16). Melville residents' response correlated with a similar reaction in Hamburg, Germany, where residents openly rebelled against what they perceived as a brand that was enforced on their community without their approval (Beckman & Zenker 2012:5). The interviews also confirmed the theory of community-based design that socially

responsible design should in practice not be about the designer, but rather about the experiences of the community utilising and viewing the designs (Shea 2012: 110).

Through various further conversations, specifically with Marie-Lais Emond from the MCDO in February, 2013, it was decided that the Btech Graphic Design students would still continue with the community engagement project within Melville. The project would instead focus on aspects of place branding such as sub-brands, as well as some of the problems highlighted by the 2012 Strategic Communications honours students.

In this paper, I reflect upon the challenges and complexities inherent in the task of urban regeneration through branding and presents several case studies of the Graphic Design students' design challenges, engagement strategies, design solutions, outcomes of the projects as well as the lessons individual students learned. These case studies include how problems were perceived and conceptualised, the designs themselves and how the projects were received by the Melville community and individual stakeholders, where relevant. I argue that communication design can be positioned as a discipline that can help solve problems within communities in impactful and innovative ways, if the community is allowed to be involved in the shaping of the project. By framing design projects as a problem-led praxis situated within and constrained by complex communities, students learn skills that allow them to enter the world as aware innovators who feel comfortable approaching communities to offer support through socially relevant and responsible design.
Body: Building Melville's brand through its initiatives, culture and entertainment

The sixteen Graphic Design students were tasked with identifying an existing challenge or community initiative and its stakeholders, with the help of the MCDO and MRA. Students were briefed to "(d)evelop and promote the broader Melville precinct (Melville, Auckland Park, Westdene) as a unique, enchanting, suburban village within the greater Johannesburg through branding, either for current community initiatives and cultural events that need a brand and campaign, or a viable precinct brand (with all its elements) for the area and its surrounds or other identifiable media" (Van Zyl, 2012:2).

By creating, supporting and strengthening new so-called sub-brands or flagship projects, the perceived 'umbrella' brand of Melville could also be strengthened. According to Mihalis Kavaratzis from the Urban and Regional Studies Institute of the University of Groningen, "...(e)specially the organisation of small or bigger scale art, sport and other types of events and festivals are seen as instrumental in establishing and reinforcing the place's brand" (2006:1). "Culture in the form of urban history, architecture, cultural facilities and events is the main ingredient of city promotion campaigns (Kunzmann, 2004 in Kavaratzis 2008: 4). Culture also strengthens the city's identity or as Kunzmann (2004) puts it, "…in times of globalisation local identity has become a key concern and the arts are, apart from landscape features, the only local asset to display such difference (…) the cultural content remains the last bastion of local identity" (2004:387)" (Kavaratzis 2008: 4).

When developing a relevant brand or identity, especially in place branding, a variety of stakeholders need to be interviewed on their needs, desires and vision on their area. For that reason various interested, involved and passionate members from the surrounding community were identified and requested to attend the briefing at Melon Restaurant in 7th Street, Melville on Monday, 25 February 2013 at 12:00. Each one the community members is a knowledgeable stakeholder within the precinct, involved in one or more community initiative(s), which were viewed as sub-brands to a greater community brand or identity. After sharing general information on the community projects with the various interested parties, students were required to interview individual stakeholders on their projects, the area, as well as on what each stakeholder would require from communication designers for his or her specific project.

The case studies presented in the rest of this paper are based on feedback forms completed by the students at the end of the project, personal blogs students kept to track their projects as well as the final presentations.

Case Study: 'Jo'burg City Bylaws' by Jamie Camfferman

Design Challenge

Nicky Rofail, one of the managing members of the MRA, gave Jamie Camfferman the challenge to help educate new and existing residents of Melville regarding Johannesburg's by-laws. The laws were chosen specifically to address the current problems in the area. Jamie needed to get the message across in an efficient and aesthetically pleasing manner, using the MRA's corporate colours. (Camfferman 2013: ujmelville.blogspot.com/2013_02_27_archive.html)

Engagement strategy

After an initial visit by Nicky Rofail to the class on the 27th of February, Jamie learned that Melville is viewed as a suburb people visit, but that the MRA wished it to also be a good suburb for people to live as well (Camfferman 2013: http://ujmelville.blogspot.com/2013_02_27_archive.html). Jamie's engagement strategy was, through various interviews and e-mail correspondence with Nicky Rofail, to decide which of the hundreds of by-laws were of real importance to the MRA, and then summarise them. Nicky and Jamie both agreed that it was better to make the residents happy and comfortable first before trying to attract tourists, as this would be a natural consequence when the community is content. Together they came up with the slogan "Melville: the heart of Jo-burg culture". Her main target market would be prospective residents of Melville, and her secondary target market would be current residents (Camfferman 2013: http://ujmelville.blogspot.com/2013_03_08_archive.html). Jamie also designed a poll to ascertain the current level of knowledge on the by-laws within the community. This poll was e-mailed to residents with the help of Nicky. From the poll it became apparent that residents only had partial knowledge of the by-laws, confirming the necessity of the project (Camfferman 2013: ujmelville.blogspot.com/2013_03_11_archive.html).

Whilst at times frustrating, Jamie found it helpful to work with an existing, unique client with specific requirements, rather than just following a general brief supplied by her department.

Design strategy

The project's design strategy was to create a booklet that summarises Johannesburg's bylaws into concise, easily understood typographical paragraphs in a pocket-sized A5 booklet. The booklet focuses on laws specifically for outdoor advertising, informal trading, pets, public health and hygiene, accommodation establishments, pest control, litter, noise control and public spaces. Jamie made the designs simple and aesthetically pleasing, in order to make them more palatable to the residents. This look and feel, based on the MRA's corporate identity, will potentially enhance Melville's brand (Camfferman 2012: http://ujmelville.blogspot.com/2013_03_17_archive.html). The booklet is supposed to be available on its own through the MRA and online through their website and as a Smartphone application. Individual pages could also be taken out, enlarged and used as posters. The booklet will also be available as part of a 'Welcome Kit' designed for new Melville residents. The kit also includes a safety whistle, license disc sticker, USB flash drive and a loyalty card to support local businesses. Each element also directs residents to the Melville Smartphone application, helping to create dialogue, enhance communication and create a sense of community, with a focus on safety within the Melville precinct (Camfferman 2013: Https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J).

Figure 1: By-law booklet, loyalty card, license disk sticker, panic whistle, flash drive and smart phone application.

Outcomes

The MRA plans to have the booklet printed when funding permits and made available to the general population of Melville (Camfferman 2013: ujmelville.blogspot.com/2013_03 _26_archive.html). The project has also been entered in the 2013 Loerie awards for excellent design.

Case Study: 'The Melville Architectural tour' by Osmond Tshuma

Design Challenge

Osmond Tshuma wanted to find a cheaper form of entertainment that would help highlight the strengths of Melville. He also strove to promote daytime tourism in the area as a whole, not just in 7th street, and to help improve Melville's image (Tshuma 2013: Https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J). On his first visit to Melville he was impressed by the wide variety of architecture in Melville, ranging from Victorian, Art Deco and 70s modernist buildings to interesting new designs by architects and interior designers in the area (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/melville-swot-analysis.html). Osmond thus decided to develop an architectural tour of the area.

Engagement strategy

Osmond worked closely with Marie-Lais Emond from the MCOD to develop the tour via e-mail. Through his correspondence with her he was introduced to Monika Läuferts & Judith Mavunganidze, TSICA Architectural Heritage consultants, who had completed an architectural survey of Melville in 2008. Their research included floor plans, architectural drawings, old photographs and histories for many of the historically relevant buildings in the suburb (Thsuma 2013: http://melvilleat.blogspot.com/2013/03/email-from-marie-lais-emond. html). TSICA was excited by Osmond's project and gave him permission to use their images and research to strengthen his designs for the tour (Thsuma 2013:
httphttp://melvilleat.blogspot.com/2013/03/meetings.html). He also interviewed residents from the area,

including Denver Hendricks, a lecturer in Architecture at UJ (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/architectural-research.html), as well as members of the Melville Kruisgemeente about their church building's history (http://melvilleat. blogspot.com/2013/03/melville-meetings.html). Sadly, most of the owners of the restored historical buildings that he wished to include, were not willing to participate or to be interviewed (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/meetings.html).

Design strategy

Osmond wanted the booklet and marketing materials to be educational, elegant, historically themed and inexpensive to reproduce (Tshuma 2013: http://melvilleat.blogspot.com /2013/03/melville-architectural-tour-branding.html). The logo is inspired by the Edwardian architecture in Melville, specifically the beautiful pressed ceilings still found in many of the houses, as well as the Victorian illuminated letters. The brand identity places two ideas in juxtaposition: the Victorian classic design of the logo and the modern design of the *sans serif* font, inspired by the modern architecture that will also be included in the tour (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/creative-built.html).

Figure 2: Melville Architectural Tour logo **Figure 3: Tour Plaque**

Osmond furthermore designed plaques to be placed on architectural structures featured on the tour. Initially the plaques were meant to be made of wood, but after various consultations he changed it to engraved steel due to its durability (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/creative-mock-ups.html). The plaques contain relevant information about the featured building, such as the construction date and history (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/concept.html).

Figure 4 & 5: A6 tour booklet

Tourists will be able to buy an A6 tour booklet, available at featured buildings, galleries and stores in the area for ten rand. These black and white pocket-sized booklets include a map of the area, old photographs, floor plans and architectural drawings (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/marketing-plan.html). All proceeds from the sale of the booklet will go towards printing, marketing, as well as to an urban architectural regeneration fund to restore more buildings in the area (Tshuma 2013: https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J).

Figure 6: Smart phone application.

Osmond also designed a smart phone application as an alternative option to the tour booklet. The application will enable visitors to follow the tour using their smart phones. The application will be linked to a Melville Architecture Tour website and Facebook page. Visitors can also use their smart phones to take pictures of their tour to be posted on Facebook, Twitter and Instagram through the App. The application will be available for download on the iStore and will cost the same as the pocket-sized booklet. All proceeds from the sale of the application will also go towards

printing, marketing and the urban architectural regeneration fund, in order to restore more buildings in the area (Tshuma 2013: https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J).

Figure 7: A1 poster

Figure 8: A branded Tuk-tuk

The tour will be marketed using A1 black & white posters, which can also be re-sized to A5 flyers. The posters and flyers will be placed around Braamfontein, Westdene, Auckland Park and Melville to inform tourists on the Melville Architectural Tour (Tshuma 2013: https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J).

Visitors will also be able to take the Melville Architectural Tour with the E-Tuk Tuk taxis, marketing both the tour and this unique, cheap, energy efficient taxi service, unique to the Melville area. Tours can be co-ordinated by a Melville resident, by a Tuk-tuk driver or by the tourists themselves. More buildings can be incorporated into the tour in the future if more home, restaurant and B&B owners volunteer to be on the tour (Tshuma 2013: https://www.dropbox.com/sh/gk9pr2pqbnzzddo/mIYVM6AB8J).

Outcomes

The client was happy with the final designs. The project will be handed to the MCOD for potential implementation. The project's success depends on the stakeholders, who were not all interested in participating in the tour (Tshuma 2013: http://melvilleat.blogspot.com/2013/03/meetings.html). The project has also been entered in the 2013 Loerie awards for excellent design.

Case Study: 'Walk Melville', by Philile Sithole

Initial Design Challenge

Philile Sithole chose to tackle the serious issue of Melville residents' and tourists' perceptions of crime in the area (Sithole 2013: http://stopbeingafraidmelville. blogspot.com/2013/04/stop-being-afraid-of-melville.html). Philile wanted to inform residents especially of the big improvements regarding security made by the MRA, Melville Security Initiative and the Melville Sector Crime Forum in the suburb (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/2013/03/the-melville-security-initiative.html). She also wanted to make residents feel safer without increasing the number of security guards, as well as to get the community actively involved in working against crime in the area by taking back their streets (Sithole 2013: 6).

Engagement Strategy

Philile based most of her work on research found on the Melville Security Initiative's website as well as on e-mail correspondence with its chairperson, Peter Rolfe (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/2013/04/stop-being-afraid-of-melville.html).

Initial Design Strategy: 'Stop being afraid, Melville.'

Philile Sithole initially worked on an awareness campaign to inform members of Melville of the increased security in the area. She named her campaign 'Stop being afraid, Melville', based on graffiti she had observed on her first visit to the area (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/2013/04/stop-being-afraid-of-melville.html).

Figure 9: 'Stop being afraid of Melville' sign

Figure 10: Promotional bag

Philile wanted to place posters and signs in various streets of Melville. Her main message with the signs would be to encourage people to not be afraid of walking around in Melville, as well as to make it clear to potential criminals that the community is working together against crime. Residents would be invited to wear promotional items to show their support of the security initiatives. Philile also wanted to hand out little promotional packs containing a map of crime hot spots in Melville and surrounds, a brochure on getting to know one's neighbours and on ways in which a neighbourhood watch could be facilitated, important security phone numbers and web addresses, as well as safety tips (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/2013/04/stop-being-afraid-of-melville.html).

After Philile had completed her campaign she showed the designs to classmates as well as to Peter Rolfe on 4 April. Peter and her classmates agreed that the campaign had too many negative connotations. Philile chose to relook her campaign and change the message (Sithole 2013: Feedback form).

New Design challenge

In her initial research Philile had found various interesting articles on 'walkable' cities and on ways in which more residential foot traffic could increase the security of an area. She loved the idea of safe walking routes

with a pleasant atmosphere. According to Jeff Speck's book *A Walkable City*, walking routes have to be useful, safe, comfortable and interesting. This would also lessen traffic on Melville's roads. When people feel safe and secure in an area they spend more time there and spread the area's virtues through word-of-mouth. Making Melville a more 'walkable' suburb thus became her new design strategy (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/2013/03/security.html).

Philile's design strategy was greatly influenced by a guerrilla way finding campaign by Matt Tomasulo, *WALK [YOUR CITY]*. Matt wanted to encourage his neighbours to walk instead of drive in the city of Raleigh. Matt posted signs with walking times and directions to various destinations. They were such a hit that, although the City took them down due to the lack of a permit, it immediately began a pilot program to use them officially. Tomasulo decided to encourage other cities to do the same (Tomasulo 2012: http://walkyourcity.org). Philile liked the simplicity of the campaign and wanted to combine this with *A Walkable City*'s ideas of walking routes for Melville (Sithole 2013: http://stopbeingafraidmelville.blogspot.com/ 2013/03/cool-city-campaigns.html).

Final Design Strategy: 'Walk Melville'

Figure 11: 'Walk Melville' logo

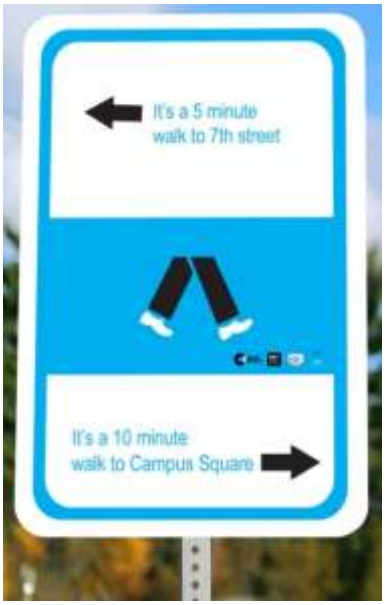

Figure 12: A2 Streetpole poster

The new campaign would inform residents of distances and time it would take to walk to relevant places in Melville through A2 Street pole adverts in various locations in Melville. The adverts also contain a Quick Response (QR) code which pedestrians can scan using their smart phone to obtain information on their current location as well as see where they are on a greater map of Melville. The goal of the campaign would be to encourage more residential pedestrians to explore Melville and all it has to offer, as well as inform passersby of interesting and useful sites in the area. Walking routes, health and safety tips and information on Melville security projects would be handed out to people in the form of a booklet (Sithole 2013: 8. Envelopes containing the brochures would also be handed out by real estate agents to new residents of Melville (Sithole 2013: 15). Philile hoped her new campaign would link up with the various security initiatives in Melville, and in the end extended to a Walkathon (Sithole 2013: 8).

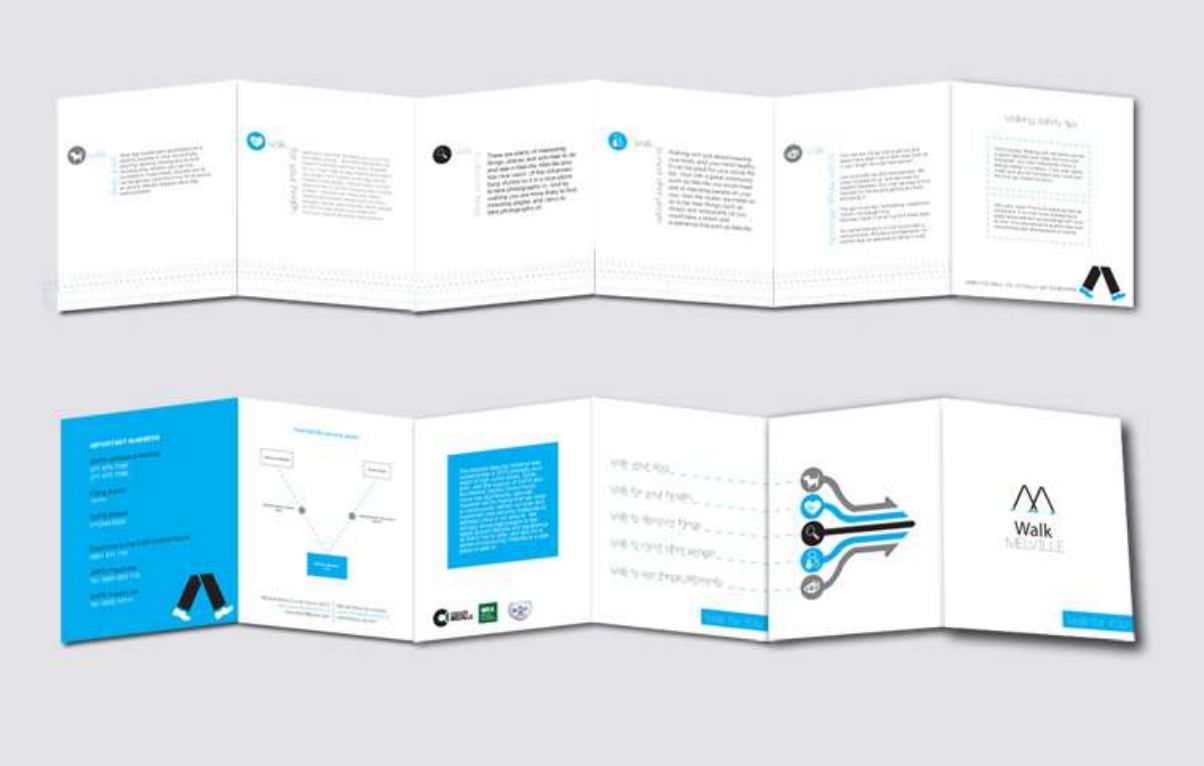

Figure 13: 'Walk Melville' booklet

Outcomes

Philile's new campaign was received favourably by her client. Within a very short time span, due to proper initial research, she managed to turn a negative campaign into a positive well-rounded campaign (Sithole 2013, https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).

Other projects

The three detailed case studies were not the only successful campaigns, as is demonstrated by a summary of a few other successful projects by the students:

David Mabotja wanted to design a project to promote Melville as a community, in order to encourage more community engagement and to celebrate the suburb's unique charm. His campaign strategy was to place more lights in the residential areas of Melville by means of solar light jars. Residents of Melville, specifically but not solely families, would be encouraged to purchase a kit consisting of a CONSOL Solar powered jar (to conserve energy), sheets of coloured paper for origami designs, instructions for folding the paper and a calendar. Residents would be encouraged to put the solar lights outside their front door or gate with a coloured piece of origami inside. Residents could change the origami piece each month to coincide with a current local event, such as the Melville Poetry festival in October, or with a public holiday or season, such as autumn or Valentine's Day. These added street lights would increase safety and security, evoke a sense of community and bring more colour to the residential parts of Melville. These lights could also promote ways to save energy, community engagement and communicate events within the community, as well as encourage tourism within in the area by adding to the Melville magic (Mabotja 2013: 3-4).

Figure 14 & 15: 'Melville Lights' Campaign by David Mabotja

Ayanda Mbanjwa, as part of her research, went out in Melville's 7th Street for her birthday on the 9th of March and interviewed her friends on the experience afterwards (Mbanjwa 2013: http://musicalmelville.blogspot.com). She also interviewed restaurant and club owners in 7th Street. Through her research she concluded that 7th Street is the cultural hub of Melville, that the nightlife in this street is very active and that it had a unique charm due to a lot of live music (Mbanjwa 2013: Https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw). Ayanda thus decided to design a brand, 'Musical Melville', to market the different genres of live music played in Melville, specifically in 7th street. The brand aimed to market the variety of music offered at the different venues, encourage clubs to introduce more musical genres to widen the market, help up and coming artists interact with successful artists in the music industry and co-ordinate and market live music events (Mbanjwa 2013: http://musicalmelville. blogspot.com). Ayanda designed a map of 7th Street, with icons showing what musical genres visitors could expect from the different clubs and restaurants. To market the brand and the events she designed a flyer, posters, business cards, branded stationary and banners. The flyers would include the map as well as information about events and performances taking place. She also designed promotional items such as canvas tote bags, CD sleeves, t-shirts, stickers, coasters, a promotional CD, badges and headphones. For more detailed promotion Ayanda designed a website to market the brand, bands, performances and events. The website would also contain an interactive map and an up-to-date photo gallery where people can view photos of the different events. Visitors will also be able to upload images of their experiences at these events (Mbanjwa 2013: 3).

Figure 16: 'Musical Melville' website by Ayanda

Mbanjwa

Seres Oliver chose to promote the high number of artists operating in Melville. Seres was inspired by Sally Whines from the Melville Temporary Contemporary's presentation of the annual event where participating artists open up their homes and studios to the public in order to exhibit and sell their art. Seres liked the idea of helping local artists sell their work, but she wanted it to be a more permanent initiative (Oliver 2013: http://seresbo. blogspot.com). Seres's design strategy was to create a network for local artists, shop and restaurant owners within Melville named 'The Melville Art Connection' (TMAC). Artists and shop owners can register as members on the TMAC's website. Once shops and restaurants join they receive a sticker for their front window. Customers will thus be informed that they can purchase original artworks in the venue. Shops receive a small percentage of the profits made from the sale, as well as free advertising on TMAC's website. Artists who register on the website will be featured with a small biography and examples of their latest work. Exhibitions will also be marketed on the website (Oliver 2013: 4).

Figure 17: Logo conceptualisation for 'The Melville Art Connection' website by Seres Oliver

Student Feedback

Students were requested to complete feedback forms on their experiences and on the lessons learned during the project. They also had to describe how their clients influenced their work, as well as the biggest challenges in the brief. Most students stated that they had enjoyed working with an actual community, as well as doing research within a real space.

Osmond Thsuma firstly stated in his personal feedback form that he had loved the high level of engagement with the client and residents regarding the research. He says that he learned to "design for people, not for designers". Osmond also learned to work on a tight budget, which greatly influenced his designs as well as his chosen media. In the end he was highly satisfied with his final designs and found it to be a wonderful, challenging project (Tshuma 2013, https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).
From this project Philile Sithole learned to reflect on how people perceive specific developments in their area, for example: if residents observe more security guards in their area they could view it as unsafe. In the same way her 'Stop being afraid, Melville' campaign could in fact make residents feel less secure (Sithole 2013: Https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).

David Mabotja mentioned that he was initially concerned about coming up with a good concept because of the open brief (Mabotja 2013, https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).
Ayanda Mbanjwa learned the importance of being in constant communication with her clients. She observed that listening to the client was very important "... because at the end of the day you are working towards meeting their needs" (Mbanjwa 2013, https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).

Seres Oliver remarked that working with interested stakeholders and an actual client helped to highlight and solve potential technical difficulties, as well as to gain insight in their concerns. She found assisting her clients come up with solutions to real-world problems the most enjoyable part of the project (Oliver 2013, https://www.dropbox.com/sh/3n62rsvroaf5jo5/-ReM3hvLjw).

Conclusion

This paper examines some of the problems and complications of community engagement, with a focus on urban regeneration and branding within a city. Three case studies were discussed in detail and three briefly, with a focus on the project's scope, students' engagement with the community, the design outcomes, the community's reception of the work as well as the insights students gained from the project. These projects prove that communication design as a discipline can aid urban renewal, if the correct stakeholders are identified and consulted during the research and design process. Most students confirmed in their feedback that, whilst it was challenging to make contact with community members, the feedback greatly improved and guided their designs. Communication Design as a discipline can aid social development and urban renewal within communities, but only if the relevant people are involved and receptive to the support. In the end, effective communication designers do not design "for" the community, but "with" the community.

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[i] As an example, within the Christian religion (and indeed in most religions) the notion of "do unto others as you would have them do unto you" can be rephrased as "*allow* others to do unto you and you would *want* to do unto them." Placing the indigenous community and the researcher in this situation encourages the researcher to consider whether what he or she is planning to do, he or she would allow to be done to him or her. In a crude example, if the design research 'takes' designs from a community, would he or she be comfortable with allowing the community to take something from him or her -- in research one might assume that the latter case could be considered a form of plagiarism! The question, therefore, in terms of ethics, is whether the design researcher isn't, in the former case, also committing "plagiarism." By addressing reciprocity in this manner,

we argue that the researcher is engage in his or her research project from the point of the view of the participants. Ironically, this is exactly the perspective that most Ethics committees should (and do) take. However, speculatively, many Ethics committees still bring a western paradigm to bear on their understanding of the rights of the 'indigenous community'

[ii] This should be seen against the plethora of bills and acts that govern the ethics of research in medical and environmental areas, for example.

[iii]Two examples illustrate potential conundrums. Firstly in the African ethical realm of 'uBuntu' inclusion is encouraged and accepted, yet western research often does not 'include' the community in the research process, and the act of 'participation' is conceived only from the point of view of the researcher – the community 'participates' in his or her research, but the research does not 'participate' in the community. Secondly, in many African communities, strong lines of patriarchy and autocracy are practiced – seen by many western searchers as an anathema to the liberation of women, the rights of the individual and the democratic process. Seen from 'within' the community, however, these areas may not be problematic. Munro's personal experience in this area speaks to how Ethics committees do wrestle with this conundrum.

[iv] It is interesting to note that increasingly men are being depicted in sexually objectified ways in consumer media (Rohlinger 2002; Schroeder and Zwick 2004).

[v] The themes 'Feminine touch,' 'Function ranking', 'The ritualisation of subordination', and 'Licensed withdrawal', are based on Goffman's (1979) early framework in *Gender advertisements* yet continue to be relevant in the work of contemporary scholars (see Borgerson & Schroeder 2002, 2005; Jhally 2009; Kang 1997; Morna & Ndlovu 2007; Stamps & Golombisky 2013).

[vi] On a more positive note, some beauty brands such as Dove for example, are working towards more constructive portrayals of women by using more realistic standards for the body type and weight of the models in their advertising campaigns.

[vii] The Advertising Standards Authority of South Africa (see www.asasa.org.za) regulates images of explicit sex and violence within South Africa media, however, as in any globalised media space, these and similar types of images are freely available on the Internet and in imported magazines.

[viii] While one must heed against oversimplifying African hair styling practices, such as straightening or the use of weaves, necessarily as a negation of ethnicity and the valorisation of Western ideals, one must also acknowledge South Africa's destructive apartheid legacy and racist classification practises that ostracised physical features of black ethnicities (Erasmus 1997, p. 12).