**FLUX: Design Education in a Changing World**

**Pedagogical approaches to learning and curriculum development in Design for inclusion and self-realisation of learners.**

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## Abstract

*The study investigates appropriate approaches to new curriculum development and educational practice at the Cape Peninsula University of Technology (CPUT).This is necessary in order to ensure success of the multi-cultural student body and facilitate the creation of ethical and culturally unique design solutions by the Bachelors of Technology (BTech) Fashion and Surface Design learners at CPUT. By using the research dissertations and studio work of six learners as examples, possibilities of best practice and challenges with regard to this diverse context are highlighted, as the success of these learners in the 2006 BTech programme is analysed in a qualitative manner. The study concludes that different approaches to learning are used when culturally diverse learners engage with the design curriculum, and that cultural ways of knowing and embodied knowledge are powerful determinants of preferred learning styles which ultimately impact on learner success. The study identifies that the secondary discourse approach, when linked to other learning approaches, can make a valuable contribution to the learners design process, and by extension to the troubled South African context since it includes a sense of creative knowledge as behavioural and ethical mediator.*

## Key words

## Introduction

Curriculum design and development in Higher Education Institutions in post-apartheid South Africa must reflect new epistemological paradigms. This is necessary in order to ensure success of the multi-cultural student body and facilitate the creation of ethical and culturally unique design solutions by the Bachelors of Technology (BTech) Fashion and Surface Design learners at the Cape Peninsula University of Technology (CPUT). By using the research dissertations and studio work of six learners as examples, possibilities of best practice and challenges with regard to this diverse context are highlighted, as the success of these learners in the 2006 BTech programme is analysed in a qualitative manner. This study is part of a collaboration by two design educators working in the Fashion and Surface Design department at that HEI and reflects their mutual interest in creative teaching practice and ethical design.

## Background to the research problem

Curriculum is understood in this paper in its broader context, that of contextualized social practice which includes, according to the South African Qualifications Authority (SAQA), an ongoing social process comprising the interactions of students, teachers, knowledge and setting (SAQA, 2003). As such the study is concerned with social change and cultural inclusion, and education's capacity to give rise to learner success and ultimately social transformation. With regard to the Fashion and Surface Design curriculum at CPUT, this means that holistic pedagogical approaches and principles for instruction delivery and studio practice should be used, to address as far as possible, the varied needs of the multi-cultural learner group. In this way, the knowledge constructed can be seen as a process of making meaning through interaction (Mckenna, 2003), to produce responsible and ethical designers. Furthermore, these approaches and principles, according to Au & Jordan (1981), have to include quality instruction delivered in an appropriate teaching methodology and an induction into curriculum that is compatible with language and social interaction models of home and community, if they are to be successful. Exactly what do these pedagogical approaches encompass however in the complex South African context, and how can the design curriculum and teaching methods be structured to reflect this context?

## Methodology

A reflective methodology is used as the basis underlying all of the research methods used in this study. Reflection serves as a framework which supports the basic tenet that meaning is not imposed by direct instruction, but is rather created by the students' learning activities and their approaches to learning (Biggs, 2003). Reflection also provides learners and design educators alike with an opportunity, in a particular setting, to deepen the processes of understanding and knowledge construction. Reflection by learners and lecturers alike happened in the form of journaling, studio critiques and peer review sessions. In addition, another form of research appropriate for the educational field, as identified by Carr and Kemmis (1986, cited in Merriam, 1998: 4) is used, namely the *interpretive* form.

The interpretive form of research aims at understanding the meaning of particular experiences and constitutes knowledge acquired in a particular context through a theory-generating mode of inquiry. These two methods were used in dialogue with each other in the study, since "interpretive curriculum design values academic autonomy where individuals interpret national and institutional policies in the light of their classroom experience. In this paradigm…it is a commitment to reflection that is valued" (Mckenna, 2003 :218).

## Flux in the studio: a succession of changes

Design Education (DE) has been at the forefront of coping with change for many years. This is partly due to a fragmentation in design practices "driven by disciplinary and professional demarcations" (Love, 2000: 242), which meant that a high level of adaptability was and is required in the discipline. CPUT design learners are coping with change on many levels too regarding digital technology, greater expectations at the University of Technology (previously the Technikon) and ultimately a changed workplace and society. Changes in the choice of research topics in Surface Design (which were previously more vocationally focused and discipline specific, i.e Textile Design) and Fashion Design, over the last couple of years are clearly illustrated by the topics chosen for discussion in the study. The change to engage a wider base in order to design for "human futures" (Love, 2000), rather than for a specific and narrow area of specialisation in a rapidly changing industry was actively encouraged by lecturers and industry alike. Love (2000) argues that human futures are at the centre of design activity since design is aimed at creating positive change for individuals and societies by responding to social, ethical and cultural concerns.

Against this background, it is useful to bear in mind that Fashion and Surface Design research topics are originated and developed co-operatively, in a group setting, during a series of seminars, and subsequently during individual meetings. The amount of difficulty that some learners display in *advancing* their research topics independently, despite this interactive context, in what seems at times like an inability to move from a passive (spectator) capacity to an active (participator) capacity, leads to assumptions that design educators are unintentionally imposing external frameworks on learners since "the subjective influence of the researcher's (*or educator's*) identity is seen as unavoidable…" (Mckenna, 2003: 219) my italics. How then, can these learners be brought successfully into the design research process?

## Learning approaches and preferences

Two distinct approaches to learning favoured by the BTech learners under discussion were identified, namely an academic discourse approach and a secondary discourse approach (Gough, 2000). The two approaches are mutually supportive, and both may display features of surface and deep approaches to learning (Biggs, 2003). The academic discourse approach is outlined by Gough in the following way: "…[it] has more to do with apprenticeship to western rhetorical norms –the shape of thinking and writing and talking which takes on a culturally quite unique form of discourse…[it] is strongly based on a rapid journey to a point" (Gough, 2003: 53). The secondary discourse approach has more in common with African norms, is embedded in community practice and values oral tradition. It is often characterised by a slow style of speech and the use of pauses to facilitate brief moments of reflection (McAllister 1990: 134 cited in Gough). Although the two styles differ in their intention, some of the structural features of secondary discourse are similar to those found in academic discourse. They include a coherent structure, an opening and a closing, and a thematic stanzaic structure (Gough, 2000).

Learners with a preference for a surface approach to learning tend to engage with what lies on the surface of a particular learning task, they work with the obvious and literal acquisition of knowledge. Biggs argues that learners favouring the deep approach engage the task meaningfully by using the most appropriate cognitive activities for achieving this goal. Deep learners display appropriate background knowledge and a well-structured knowledge base, the ability to focus at a high conceptual level, and the ability to work with principles, underlying meaning and successful applications (Biggs, 2003). Deep and surface approaches to learning are not fixed characteristics but describe the way learners relate to a teaching and learning environment, and both have a valuable place in knowledge construction. The next section outlines how six multi-cultural learners employed some features of these different learning approaches in their BTech research projects, and the success of these approaches in their research projects is discussed.

**Background to the development of learner research topics**

*- Ashputtel:* She reflected ethical and environmental concerns in her choice of research topic. As an animal-lover, Ashputtel developed a research topic in line with current international animal anti-cruelty thinking in the fashion industry. This means that animals should not suffer in any way if fleece, fur or hair is obtained for use in the fashion industry and that the harvesting thereof should always happen in a humane way. Angora rabbits, Merino sheep, Alpacas and German Shepherd dogs were among the animals used for their coats. The harvesting methods included shearing of fleece and gathering of shed hairs, which were subsequently felted in different ways to produce her range of garments, boots and accessories.

*- Zeke:* She reflected sociocultural concerns in her choice of research topic. As a politically active learner, Zeke developed a research topic which investigated the phenomenon of migrant labour in South Africa, particularly as it pertains to mine workers on the Johannesburg gold mines. Zeke sought to bring a fresh and positive perspective to this controversial practice, by highlighting the integrity and inner strength required to perform strenuous and often dangerous physical labour to support a distant family. The choice of topic was also informed by her father's experiences as a gold miner, and true to the secondary discourse approach, which values oral tradition, he passed these on to his children in this way. Her creative response to migrant labour issues was to analyse items of worker clothing, and by de-constructing and re-constructing them, originate a range of clothing to enhance awareness of and honour the worker.

*- Elizabeth:* She reflected sociocultural concerns in her choice of research topic. She focussed on developing a national cloth for the Batswana, to replace the commonly used "German Print" cloth in Botswana.

*- Jane:* She also reflected sociocultural concerns in her choice of topic. She focussed on the use and preservation of Afrikaans as a minority language in Namibia, by designing a range of banners to be used at cultural festivals.

*- Olan:* Environmental and cultural concerns were reflected in her research topic. She focussed on the traditional art form of paper-folding or Origami, and how this creative technique can be used in a different way to inspire a range of minimalist and multi-functional garments.

*- Paul:* He reflected sociocultural concerns in his choice of research topic. He focussed on an African urban aesthetic to inform a range of menswear garments.

**Preferred learning approaches**

*- Ashputtel:* The topic was investigated on a multi-dimensional level, with Ashputtel making use of an academic discourse approach and a secondary discourse approach underpinned by a deep learning approach. She started her research process in the first term by keeping a reflective journal, which included reading, recording thoughts, concepts, verse, songs, sketches and whatever type of material she thought necessary to inspire and inform her creative process. During a series of interactive seminars particular attention was paid to the notion of an embodied knowledge. Macklin (2006) describes this as an awareness of the world grounded through (not only the intellect) but also tactility and the senses. Embodied knowledge was used as a form of thinking and knowledge production which employs *all* the senses during the experiential moment of making, when thinking is less the product of premeditation, but rather presents as action itself. Embodied knowledge as meaning-making method was chosen to try and conflate artificial divisions (for instance between theory and practice) and to afford all students in the

multi-cultural group the opportunity to work from a personal and culturally relevant locus. Ashputtel linked the conceptual problem with embodied memory during making, and developed a range of garments in line with the various archetypes depicted in selected fairy tales. Her preferred way of working incorporated concept and practice, drawing and designing, felting the fleeces, and dying them with organic dyestuffs while recording the process in her journals.

- *Zeke:* At first the topic was investigated on a multi-dimensional level, with Zeke making use of an academic discourse approach and a secondary discourse approach underpinned by a deep learning approach. She also started her research process in the first term by reflective journaling, which included reading, recording thoughts, concepts, verse, songs and sketches. During the interactive seminars, Zeke enthusiastically spoke about her topic and its sociocultural and political relevance. The embodied knowledge approach of the seminar series seemed to have been effective at first, with Zeke drawing on her background for proposed choice of fabrics, styles and creative techniques. Zeke failed however to link the conceptual problem with embodied knowledge during the process of making. In fact the process of making was largely lacking. Instead she continued to *talk* about what she planned to do without producing much evidence. She increasingly strengthened her preference for the secondary discourse approach which she linked with the surface approach to learning. Zeke interpreted the topic literally, and was concerned with detail from the outset, which meant that she was largely unable to visualise the bigger picture. This in turn resulted in her struggling to reconcile the dissertation and the practical body of work. Zeke continued to favour the secondary discourse approach by talking enthusiastically about her topic until after the first assessment, but ultimately she was unable to respond adequately on the conceptual, academic and practical levels.

- *Elizabeth:* She investigated the topic on a multi-dimensional level, making use of an academic discourse approach and a secondary discourse approach underpinned by a deep learning approach, and at times a surface learning approach. Elizabeth started her research process in the first term like Ashputtel and Zeke. She attended the off-campus interactive group seminars, and focussed on balancing her learning approaches. Elizabeth explored the notion of embodied knowledge extensively and this underpinned her practice and theory.

- *Jane:* She investigated the topic on a multi-dimensional level at first, making use of an academic discourse approach and a secondary discourse approach underpinned by a surface learning approach. Jane could not advance the research project beyond the initial stages and was unable to progress to a deep learning approach. Like Zeke she interpreted the topic literally, and was concerned with detail from the start rather than visualising the bigger picture. This in turn resulted in her inability to reconcile the dissertation and the practical body of work.

- *Olan:* She investigated the topic on a multi-dimensional level, making use of an academic discourse approach and a secondary discourse approach underpinned by deep and surface learning approaches. Like the others, she attended the off-campus interactive group seminars, but at times found it hard to move away form the theoretical concepts underlying deep learning and transforming them into practice.

- *Paul:* He investigated the topic on a multi-dimensional level, making use of an academic discourse approach and a secondary discourse approach underpinned by deep and surface learning approaches. Although Paul made extensive use of the secondary discourse approach, he indicated that his preferred learning approach was academic discourse. At first his academic arguments were incoherent, but subsequently he developed a more balanced learning approach and his arguments were clearer and more to the point. He also attended the off-campus interactive group seminars, and focussed on balancing his learning approaches. Paul explored the notion of embodied knowledge extensively and this underpinned his practice and theory.

**Assessment practices**
- *Ashputtel:* Continuous assessment practices were followed throughout the year, with lecturer and peer review sessions on a regular basis, and formal assessments occurring at the end of the first term, the second term and culminating in a final assessment and public exhibition of the practical work. The first term assessment took the form of a progress assessment, and a clear direction for the rest of the year was required. Ashputtel's work was consistently on time for feedback sessions and studio critiques, and her first and second assessments recorded very positive results. She continued her engagement with the

topic on a multi-dimensional level, and achieved success in the final assessment when she qualified as one of the top two BTech learners in that year.

*- Zeke:* The first term assessment indicated that Zeke was starting to slow down, illustrating less involvement and commitment to the research process than at the start. Lecturers expressed concern about her lack of clear direction and her inability to consolidate the topic by producing at least some of the proposed garments. In the second term her work was consistently late for feedback sessions and studio critiques, and Zeke failed the practical component during the second assessment. She continued distancing herself from the topic, her peers and studio critiques. Zeke stopped exploring the practical and theoretical processes during the third term, and did not submit her body of work for examination at the fourth and final assessment. She failed to qualify.

*- Elizabeth:* She was consistently on time for studio critiques and presentations, and she continued her engagement with the topic on a multi-dimensional level. As the year progressed, she developed her topic independently while building strong intercultural relationships with her peers. She qualified as one of the top five BTech learners in that year.

*- Jane:* Like Zeke she started to slow down after the first term assessment by being less involved and committed to the research process than in the beginning of term. Jane did not submit her body of work for examination at the fourth and final assessment. She failed to qualify.

*- Olan:* She struggled to keep to assessment dates, but nevertheless adequately illustrated her commitment and involvement, usually by using secondary discourse approaches. Olan slowed down considerably during the fourth term, and only with a concerted effort did she manage to submit her work for the examination and final assessment. She managed to qualify.

*- Paul:* He struggled at times with keeping to the dissertation assessment dates because he had to re-write and edit work frequently. He was however consistently on time for studio critiques and presentations, and he continued to engage his research topic. As the year progressed, he refined his topic in a more self-directed manner, while building strong intercultural relationships with his peers and lecturers. He managed to qualify.

## Discussion

From a broader perspective, the variance in student success may be partly ascribed to historical factors, including inequality in the education system before 1994, but contradictions are evident here. Zeke and Paul are both from the Xhosa cultural group and share a previously marginalised background, but their academic success is contrasting. Ashputtel and Jane are from the Afrikaner cultural group and share a previously non-marginalised background, and they also achieved contrasting academic success. Elizabeth, who is from the Batswana cultural group and Olan who is Korean, enjoyed a very different schooling background to the South African learners, and they also had contrasting success. What these learners had in common was the fact that they were English second language speakers. The medium of instruction at CPUT is English. When teaching a multi-cultural group such as this one however, problems arise since South Africa has 13 official languages. Zeke, Jane, Olan and Paul identified inadequate command of English as a big obstacle in their learning process as it slowed down their reading and research components. It also emerged that apart from language, learning styles seemed to influence learner success considerably.

When analysing Zeke's learning path for instance, it becomes clear that the oratorical style of learning, which forms part of the secondary discourse approach, was her favourite learning style. Talking about her research in detail, she described, often in a moral tone, the noble character of the mine workers and their impressive contribution to the South African economy. Zeke seemed to get stuck with the initial stages of concept development though, and focussed on the literal and obvious solution to the design problem which is a feature of the surface learning style, and she was unable to advance the concept by deeper investigation in order to, as Biggs (2003) argues, focus on underlying meaning of main ideas, on themes, principles or successful applications. Rather, she was inclined to circling the same point, a feature of the secondary discourse approach. Jane also subscribed to this learning style as she described the noble character of the 'Voortrekkers' (Trek boers) and *their* impressive contribution to South Africa. According to Gough (2000: 55), the moral tone that is noticeable in some secondary discourses, and which Zeke and

Jane (and Ashputtel) employed, "may have as its basis a perception that knowledge should relate to and direct behaviour, that it is an intrinsic part of 'ubuntu' (African collectivism) rather than something for and in itself".

This notion of knowledge as behavioural mediator and ethical driver, particularly in arts and design, is articulated extensively in the literature (Ashton, 2000, Baker & Wormald, 2000, Love, 2000). From a different perspective then, the narrative, moralistic component in Zeke's and Jane's secondary discourse approach, when serving as behavioural mediator, may have a positive contribution to make in their design process and by extension to a society struggling with serious problems, such as a high crime rate, diminished social responsibility and ethical development. This is particularly relevant if the two oppositional perspectives can be brought into conversation with each other to facilitate a better cultural understanding. It seems however, that the moralistic aspect of the secondary discourse approach has to be linked with aspects of the deep learning approach to advance learner success; a link that Zeke and Jane failed to make. Upon reflection, this stage in the development of Zeke's and Jane's research projects required additional first-language support. Support possibilities include specific tutorials by first language speakers in order to engage the learner in conversation to clarify and advance thinking and concepts. In addition, by identifying and acknowledging different approaches to learning (such as the secondary discourse approach) and types of knowledge such as cultural or embodied knowledge/indigenous knowledge, and by including these in the curriculum, design educators may prevent the imposition of external frameworks on learners. These all form part of new epistemological paradigms in the design curriculum which will ensure inclusion and self- realization of all learners.

Ashputtel and Elizabeth on the other hand, did not seem to have a preferred way of learning, but used the various approaches in a balanced way. The notion of an embodied knowledge found ultimate fruition in both their learning processes as they embedded their research projects in a tactile and sensorial way. This combination of learning styles linked with embodied knowledge appeared to influence learner success most positively. Ashputtel used her belief system (animal anti-cruelty campaigner and environmentalist) and personal history successfully as an embodied ontology, as did Elizabeth (as an African designer replacing dominant colonial textile design). In other words, their creative and learning processes were deeply embedded in the notion that only they could bring to the research project what they did. This is consistent with a key concept in embodied knowledge namely that the individual's body carries, as impressions in the senses, an idiosyncratic life-history. A personal history can be used by the individual as an embodied ontology (Macklin 2006). The embodied ontology or autobiography, can, and should be used as a means to secure the lived experience of learners for critical engagement with design learning tasks. When autobiography is used optimally during the design process, the learner is completely immersed in the research problem and is able to advance the project in a self-directed manner while giving expression to her particular identity and culture. This is important since the globalised nature of design frequently leads to design solutions of a homogeneous kind, devoid of a particular identity (Rytel, 2007). Both Paul and Onan also favoured a multi-dimensional approach to learning underpinned by the use of embodied knowledge, which they expressed in their projects as moral activism and environmental concerns. These design concerns are echoed by Love (2000) who argues that design is aimed at creating positive change for individuals and societies by responding to social, ethical and cultural concerns. Furthermore, an ethical design curriculum will respond to these concerns by seeking to "cultivate in its students not only an ability to recognize what is good and right in design, but a disposition to hold to that good in practice" (Stewart & Lorber-Kasunic, 2006).

## Recommendations

- New epistemological paradigms will ensure inclusion and self-realization of all learners while familiarization with cultural ways of knowing and approaches to learning will strengthen inclusion. These new paradigms have to be explicitly included in the mainstream design curriculum at CPUT, and in other HEIs in South Africa to promote multi-cultural learner success.

- Appropriate pedagogical approaches should include an interpretive and responsive curriculum and teaching methodology which reflect different types of knowledge such as cultural/embodied knowledge and Indigenous Knowledge.

- Learning styles and preferences should be identified in order to help learners build up deep learning skills, assist them in linking learning styles and in balancing personal learning approaches to ensure academic success.

- Additional support structures are needed in the form of language and subject specific tutorials presented by lecturers who are first language speakers in order to clarify and advance learners' research projects.

- Cultivating a sense of tolerance and acceptance by focussing on the contribution that each learner makes from an embodied knowledge perspective. The safe and protected space of the studio can then be experienced as a microcosm of the outside world from a cultural and professional point of view.

## Conclusion

Curriculum design and development in Higher Education Institutions in post-apartheid South Africa must reflect new epistemological paradigms. Curriculum and assessment practices should be culturally inclusive, in order to enhance the chances of success of all learners. A balanced and multi-dimensional approach to learning however, making use of an academic discourse approach, a secondary discourse approach, a surface and a deep learning approach, linked with embodied knowledge, appeared to influence learner success most positively. An ethical design curriculum which engenders in learners the ability to recognise what is good and right in design, but also a disposition to hold to that good in practice, is required. All the learners expressed the notion of an ethical curriculum as they responded to their research topics in an embodied way. This embodied ontology was used as a means to secure the lived experience of learners for critical engagement with design learning tasks, such as advancing the research project in a self-directed manner. English as the medium of instruction was identified as a challenge and additional support structures are needed in the form of language and subject specific tutorials. Design educators are urged to identify and acknowledge the positive contribution that secondary discourse approaches can make to the research process, a contribution which includes a sense of creative knowledge as behavioural mediator and ethical driver which is particularly relevant in the troubled South African context.

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