ARE WE THERE YET? GRAPHIC DESIGN'S NEXT DESTINATIONS

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Abstract

The diverse tautology applied to "graphic design" means different things depending on the perspective from which it is viewed and has become the topic for much debate in recent times. This is of particular relevance to the tertiary educational arena in South Africa, where universities (including Nelson Mandela Metropolitan University (NMMU) which provides the context for this paper) are faced with the dual spectres of programme re-curriculation and Higher Education Qualifications Framework (HEQF)¹ level compliancy in the near future and graphic design programmes will have to reconsider their relevance in a changing/changed educational and business paradigm. Determining what graphic design is and reflecting on its role in society is a critical aspect of this imminent, and important process.

This paper will attempt to define the 'new model' graphic designer by identifying the qualities, skills, values, content and contexts that best describe the practice and the practitioner; as this should also inform educational best practice, and will present a list of values and characteristics that embody the essence of graphic design for the 21st century. These characteristics can then become the basis for the development or evaluation of a best practice curriculum that is credible, relevant and vital for the future. The author contends that responding to the 'definition' will allow teaching and learning to become more relevant as the designer's identity is clarified, a broader world view is encouraged and curricula evolve to accommodate the present and future realities of graphic design communication.

Key Words: graphic design; design education; curriculum development

Introduction

As universities in South Africa (including Nelson Mandela Metropolitan University (NMMU) as context) gear up to evaluate old and prepare new curricula for graphic design programmes (amongst others), being able to clearly define the parameters of the discipline becomes a key aspect of the process. Developing or adapting curricula, such that the teaching and learning remains relevant, requires determining the 21st century designer's 'new identity' and understanding the context in which the discipline must operate. Based on a document study the present and future nature of the practitioner and the practice will be identified. From these findings guidelines for the development of a best practice graphic design curriculum will be proposed.

What is graphic design?

Using image and text to create visual communication is how the public domain perceives graphic design; a simplistic view that does not encompass the multiple activities that express what it is that graphic designers really do. Currently there are debates about this subject as professional practitioners, academics and design theoreticians attempt to clarify what is meant when one refers to graphic design as the product of a creative process. It is easier to identify "what it is that designers do" than to define "what design is", as the following extract will attest to:

They create printed and electronic communication that includes: books; magazines; newspapers; catalog[ue]s; posters; brochures; annual reports; graphic identities and logos; exhibitions; packaging; environmental graphics and signage; CD covers; movie titling; on-air television graphics; interactive websites; and multimedia programs. Their work is composed of images and typography. Graphic designers who work in film, video, or computer media also use sound and

¹ The HEQF is the guideline, produced by the South African Council for Higher Education, that clarifies level descriptors, credit allocation and articulation possibilities for tertiary education programmes.

motion as means for communicating messages (AIGA/NASAD nd.).

Landa (2011:3-8) offers a series of categories that group together the visual communication intention and therein the applications that are allied to the problem-solving approach appropriate to them: advertising; branding; identity design; corporate communication; environmental design; Information design; interactive or experience design; motion graphics; package design; promotional design; publication design and typographic design.

If the two lists cited above are "what" graphic designers do, there is still a need to attempt to describe or define the field of graphic design. Graphic designers through the process of designing, create graphic design as a product. Moreover graphic design does not exist as a result of itself but rather as the outcome of a client/designer brief. Buchanan (1995:48) states that:

[Design] is the art of inventing and shaping 2-, 3- and 4-D forms that are intended to satisfy needs, wants and desires, thereby effecting changes in the attitudes, beliefs and actions of others.

Fifteen years later this definition has to encompass forms of visual communication that never existed at that time, including the Internet, social networking, mobile technology and its multiplicity of channels of communication, virtual worlds and digital animation, TV on-demand, blogging, ambient media and viral marketing. Encyclopaedia Britannica Online (2008) gives a more pedantic definition:

[Graphic design is] the art and profession of selecting and arranging visual elements –such as typography, images, symbols, and colours – to convey a message to an audience ... Graphic design is therefore a collaborative discipline: writers produce words and photographers and illustrators create images that the designer incorporates into a complete visual communication.

Thus graphic design (or what it has become) operates in one realm that sees the role of the designer as nothing more than the conduit through which a client's message is actualised, as Shaughnessy (2008:27) puts it: "It is widely believed that graphic designers have no authorial voice". Helfand (in Shaughnessy 2008: 29) however presents the case for the role of graphic design as an active agent in the evolution of society and culture because it is,

...a visual language uniting harmony and balance, colo[u]r and light, scale and tension, form and content. But it is also an idiomatic language, a language of cues and puns and symbols and allusions, of cultural references and perceptual inferences that challenge both the intellect and the eye".

Helfand (2010: ¶1) offers further insight into the role of graphic design as an art that is visible everywhere and pervasive in its ability to bring together disciplines as diverse as art, architecture, philosophy, literature, language, science and more, in a far-reaching and sublime manner. In a similar vein Lunenfeld (2003:14) suggests that the 1980s and 1990s saw the "dissolving of the boundaries between art and design, and architecture and sculpture" a phenomenon that surely impinged on the way in which, design in general, and graphic design in particular are perceived in the early 21st century. Although Lunenfeld (2003:14) makes an important observation regarding the power of humanist design to draw communities, cultures and democracies closer together, he comments also on a higher order principle to which graphic design ascribes: "[Graphic] Design is not about serving the needs of business, but also about determining and working towards the greater good for society, government, education and the environment". Helfand (2010:4-5) supports this contemporary contextualisation by asserting that,

Graphic design achieves its ends through complex combinations of words and pictures, numbers and charts, photographs and illustrations that, in order to succeed, demands the clear thinking of a particularly thoughtful individual who can orchestrate these elements so they all add up to something distinctive, or useful, or playful, or surprising, or subversive or somehow memorable.

Graphic design is a popular art and a practical art, an applied art and an ancient art. Simply put, it is the art of visualizing ideas.

In the 21st century graphic design and visual communication have become more difficult to define according to well-established and clear parameters. The rapid conversion of the practice to computer technologies and mobile communications has irrevocably altered how the business of design is conducted, how the products of design are communicated and distributed, and how audiences receive, decode and respond to it. In virtually all spheres of its influence, graphic design has evolved into something other than logos, print and advertising, and is now an activity that involves broader

interdisciplinary engagement, a keener knowledge and understanding of social and cultural mores and a global playing field.

...we have seen the most successful practitioners progress from being 'makers of things', trained within the dimensions of finite outcomes, toward becoming conceivers of strategies, communicating complex messages clearly and considering the ways in which those messages are received by audiences over time. The designer of today is collaborative and multidisciplinary, and must become even more so in the years ahead (Grefé 2007: 4).

The de-corporatisation of design communication has resulted in more emphasis being placed on values connected to humanness, cultural sensitivity, empathy, intuition, observation and experience that result in new perspectives being presented in the solving of communication problems (Grefé 2007:7-9). The overall result of this enlightened engagement should be solutions that resolve questions with a positive outcome. These solutions emerge from a real and dawning awareness that design has become multidisciplinary of nature and has to operate in an interdisciplinary paradigm. Davis underscores this notion by pointing out that other fields have begun to claim the expertise traditionally allocated to design – computer science has "information design", mechanical engineering has "machine design", even hair and nails are "designed" (previously 'styling' would have better explained these fields, but with influence has come respectability, and thus "design" elevates their status) – and that it is critical that interdisciplinary teams bring the necessary gravitas to the meaning-making and visualisation process (Davis in Heller 2007:16).

Not only Davis and Grefé remark on the critical importance of the interdisciplinary engagement ideal, Irwin (2004) questions the efficacy of specialisation in visual arts education, as it renders students unable to see 'big picture' issues. "[The] ability to see 'wholes' and think in terms of interconnections and the relationships between things is characteristic of a broad and interdisciplinary education, not a speciali[s]ed one. She further points out that universal skills such as drawing, colour theory and critical thinking that build big-picture thinking should not be side-lined in favour of technology, as 'the way the world works' has more enduring value. Many leading universities have aligned their learning programmes to this ethos of interdisciplinarity and the human-centredness that results from it. The School of the Art Institute of Chicago (SAIC 2010), Rhode Island School of Design (RISD 2010) and Stellenbosch University (Stellenbosch University 2011) ascribe to this way, and others, like the Hong Kong Polytechnic University, are initiating revised programmes that include interdisciplinary studies or "broadening subjects" in their mix (Hong Kong Polytechnic University 2011). In their desire to produce "responsible global citizens" they highlight the role of an "enhanced general education programme" designed to broaden students' views and present them with multidisciplinary perspectives through a wider range of subjects (Hong Kong Polytechnic University 2011a).

The American Institute of Graphic Artists (AIGA), as the American visual communication industry's largest professional organisation, perceived these changing circumstances in 2007 and set out to establish what significant future factors would shape graphic design and visual communications by 2015. Recognised academic and industry leaders conferred around this question. Paramount in their deliberations was to determine the trends that were occurring in the marketplace and the competencies that would be required of designers by 2015. Moreover the public needed to understand that designers are not only people who create appealing things but rather they are people who solve complex problems with innovative solutions (Grefé 2007:13). These findings have far reaching implications and impinge significantly on how curricula are formulated for the future. The findings were reported by Richard Grefé in a series of articles through AIGA and www.designtaxi.com and are documented below.

What are the present and future design trends?

Six major trends (AIGA 2008)² were identified that will pose challenges for the design profession. Importantly, as stated above, there is a very real shift from the role of designers as the makers of artefacts to that of providing solutions that are often intangible – experiences, services and strategies.

² All of these trends emerge from the same resource, entitled Designer of 2015 Trends and are paraphrased for clarity. The document from which they are sourced is available as full-text from the AIGA website at http://www.aiga.org/content.cfm/designer-of-2015-trends. The same author acknowledgement thus applies to the entire section.

a) Need for width and depth of knowledge and experience

Designers must be able to draw on knowledge and experience from a broad range of disciplines informed by the social sciences and humanities so that they understand the content that they are required to communicate. The term used here is meta-disciplinary study as it refers to the 'invisible' knowledge required of designers in their quest to communicate clearly. The implication is that they need to be able to approach their specific discipline with depth, whilst having a broad perspective on how other disciplines impact on the outcome that they produce. Thus interdisciplinary engagement and collaborative processes are the new order.

b) Engaging with systems not components

Designers are required to cope with increasingly complicated problems that are influenced by sociological, technological and economic systems and the effect that they have on people. They therefore have to be able to deal with the complexity of these systems before they focus down to the designing of individual components of a solution, as in the traditional paradigm. This becomes more of a managing role that attempts to bridge the differences in cognitive, physical, and cultural behaviours and experiences within a diverse audience as they attempt to deliver a communication product.

c) Shift from broad to narrow targeting

Narrowly defined audiences with different cultural identities have superseded the old perception of a global, mass audience. Designers therefore are required to consider differences and similarities in their audiences as they shift to targeting narrower groups; made possible by media technologies that allow for narrowcasting and mass customisation. A significant aspect of this trend is the growing importance of ethnographic research that leads towards greater cultural sensitivity and empathy.

d) Breaking through into the attention economy

They acknowledge that the resource that is most valuable in the information age is "attention". Innovative ways must be developed to design for this economy that incorporates communication, information, experience and service design, especially considering the short-term focus of business and the rapid turnaround demanded by marketing. What factors that are informing business to see value in this approach needs to be debated by the role players.

e) Collaborating with users and clients

As with product designers who, of necessity, work closely with their clients and the users of their work, communication design needs to move into the realm of user-centred design that is co-created with users and clients (as is the norm with service design, where the Sappi Ideas That Matter competition is a fitting example) (Sappi Ideas That Matter 2010). At issue is the acknowledgement of ethnography once again and the primacy of understanding who the people are that designers are designing for and is consistent with the rising interest in all forms of social network systems.

f) Designing for sustainability

Excellence in craft goes hand-in-hand with the realisation that sustainability is fundamental to human-centredness and the managing of limited resources. Thus the emphasis shifts to simple, effective design that is sensitive to the human condition, faces the challenge of using appropriate technology, with limited resources, to ethically solve design problems in a sustainable way.

Design trends in action: Implicit evidence

Many of the 'trends' identified above by the AIGA group in 2008 are already commonplace in teaching and learning in 2011, even as they are not formally curriculated into programmes. Considering NMMU for example, the author presents the following observations regarding the Graphic Design programme.

From (a) it is possible to identify, at an educational level, the recognition of the importance of interdisciplinarity and the need for liberal arts content in curricula so that meta-knowledge may develop. Although the existing formal curriculum does not make provision for this meta-knowledge, it is addressed and highlighted as vital to learning, personal growth and subsequent professional

growth.

Student projects are nowadays, seldom perceived as isolated elements or components that are unrelated, but consider the broader ramifications of their context and draw on diverse influences and inputs for their actualisation – as in the systems approach identified in (b).

Certainly young students, already *au fait* with social networking systems and peer-to-peer technologies, without knowing it are practicing narrow-casting and are co-creating communication, and are using those vehicles to present viewpoints, forge allegiances, align to brands and share intimate and personal information in forums where "they" determine the scope of their audience. This is tantamount to precisely the points raised in (c) and (e) and is driven by the "attention economy" posited in (d).

Lastly, it is not possible to avoid addressing human-centredness and sustainability in tertiary education – young people are bombarded with issues around these topics through every conceivable media. They regularly apply their developing social conscience to their formal learning experience and the self-knowledge and empathy that they bring to solving problems – see (f). The upshot of these observations is that the trends forecast for 2015 are already playing out in the educational environment albeit in an unstructured and often informal manner. Formalising them into a structured curriculum should provide the form needed to apply them to a relevant learning programme. If these trends represent the "big picture", what then are the competencies that such a person should embody?

Identifying designer competencies

The following extract from AIGA's Designer of 2015 competencies (AIGA 2008a) presents the requisite competencies expected of a 21st century designer. Acknowledged is that this would be the skill set needed in a design studio, across the staff body, in order to meet future needs.

These competencies uncover the challenges for educational institutions, in developing curricula, and for studios, in recruiting their teams. The competencies are listed below in order of their ranked importance:

- Ability to create and develop visual response to communication problems, including understanding of hierarchy, typography, aesthetics, composition and construction of meaningful images
- Ability to solve communication problems including identifying the problem, researching, analysis, solution generating, prototyping, user testing and outcome evaluation
- Broad understanding of issues related to the cognitive, social, cultural, technological and economic contexts for design
- Ability to respond to audience contexts recognizing physical, cognitive, cultural and social human factors that shape design decisions
- Understanding of and ability to utilize tools and technology
- Ability to be flexible, nimble and dynamic in practice
- Management and communication skills necessary to function productively in large interdisciplinary teams and "flat" organi[s]ational structures
- Understanding of how systems behave and aspects that contribute to sustainable products, strategies and practices
- Ability to construct verbal arguments for solutions that address diverse users/audiences; life span issues; and business/organi[s]ational operations
- Ability to work in a global environment with understanding of cultural preservation
- Ability to collaborate productively in large interdisciplinary teams
- Understanding of ethics in practice
- Understanding of nested items including cause and effect; ability to develop project evaluation criteria that account for audience and context (AIGA 2008a).

Many of these competencies already exist as desired outcomes in established learning programmes like SAIC, RISD, Stellenbosch and Hong Kong Polytechnic. It is unlikely, if not impossible, for a single person to have a grip on all 13. That the competencies are the preferred set that would be represented in a collaborative working or learning environment is more plausible. Reassuringly,

opinion regarding the competencies required of graphic designers seems to be recognised from diverse academic quarters. Musashino Art University (MAU) in Japan has developed a reputation for outstanding design education throughout Asia and Japan. Their philosophy hinges around ideas and thinking, rather than design ability, and thus builds critical facility and constructs personal value systems through a teaching mode that balances teacher-oriented with student-oriented strategies (Wang 2010: 85). This does not derogate from the obvious importance of producing literate and functional designers, but rather implies an approach that has the resultant artefact as an outcome, not the starting point. This resonates with a number of the competencies identified above. Indeed Landa (2011:xi) puts it very succinctly when she points out that to design requires students to think critically and think creatively so that they can express and represent their creative ideas. In order to achieve this, "[m]uch is taught simultaneously - critical and creative thinking, principles, theory, strategy, conceptual design, design development, technique, visuali[s]ation, composition, social responsibility, and applications" (Landa 2011:xi). She directs her readers to AIGA's Designer of 2015 Competencies and also poses the "what is graphic design?" guestion, and presents the view that it is visual communication that conveys a message to an audience such that it affects their behaviour (2011:3). Robbins' (in Landa 2011: 3) riposte is that "[g]raphic design is therefore one of the ways in which creativity takes on a visual reality".

Nagasawa (in Wang 2010:88) adds insight regarding the design education at MAU in that they not only build design ability but also general knowledge, creative thinking and "designer-ship" within the skills training. MAU is also,

...deeply mindful of the need to arm students with a combination of generalist and specialist skills, and remain[s] faithful to [the] founding spirit of providing art and design education that allows students to function with true freedom as human beings, and to foster a new generation of artists and designers with a well-rounded perspective and erudition (Nagasawa in Wang 2010:88).

Nagasawa (Ibid.) states that they present a balanced combination of liberal arts subjects in their art and design programmes as that is the only way that students are able to develop the value systems and critical faculties that are intrinsic to art and design. AIGA's designer competencies appear to validate what academics themselves, from diverse sources, are already applying in their teaching programmes or are in the process of writing into new curricula, and what industry is adopting or has adopted to remain relevant and competitive. Elam (in Lidwell, Holden & Butler 2010:11) adds weight to this ideal by bemoaning the fact that her education gave her "considerable knowledge in form making and very little knowledge in meaning making". Present day curricula recognise the need for a deeper understanding of the human condition, human perception and a more scholarly approach to learning design, providing support for designers' intuitive engagement with the world. Margolin (2002:96-97) expresses the view that,

[j]ust as other professionals are finding ways to earn their living in the culture of sustainability, so too will designers have to do the same in order to create new forms of practice. The first step is to recogni[s]e that design has historically been a contingent practice rather than one based on necessity. Designers make choices in response to particular circumstances and situations and ignore other possibilities. Today new choices present themselves, and designers need not be bound by what they have done in the past. In years to come, design for consumer culture may be recogni[s]ed as only one form of practice among many rather than play the dominant role that it does today.

These perspectives must affect curriculum development for this and the future era. Although it is impossible to predict the 'shape' of the world in 20 - 30 years' time, the designers in training today will be at the peaks of their careers by then and their education has to go some way towards anticipating the future scenario and the skill sets that they will need.

Dilnot (in Margolin 2002:97) observes that in the move towards a 'post-product' society the designer's role becomes one of more obvious social management and a way of "ordering the world rather than merely shaping commodities". This is concomitant with the findings of Designer of 2015 Competencies and the changing emphasis to 'softer' skills, and more socially aware and humanistic approaches to design problem-solving. The vocational education approach, still prevalent in many South African tertiary institutions, was never intended to encompass the complexity of contemporary systems and their high degree of interdisciplinary integration. To provide for this need implies that

curricula need to be re-developed from scratch, shifting from the production of artefact to conceptual awareness and critical problem-solving. Davis' (2008) comment resounds:

... we tend to view curriculum as a collection of content categories: we define courses by the objects made (motion graphics), segments of practice served (web design), or technical processes employed ([P]hotoshop), not by students' developing awareness of concepts that transcend these categories, by critical or problem solving frameworks, or by the intended mediation by design.³

Davis (2008) is not suggesting that acquiring skills and producing form, product or artefact is no longer important, but rather that the route followed to reach those end points is what needs to be reassessed and that new approaches to teaching and learning have to follow. Koppelkamm (in Schmidt 2009:95) agrees as he sees the ideal designer as a reflective partner, able to work systematically and intuitively and able to understand the strong link between theory and practice. "An academic design institution should not produce well adapted service providers and software operators but autonomous unconventional thinkers" (Koppelkamm in Schmidt 2009:95). For him meaningful design arises out of, what he calls, "radical personal subjectivity" (Ibid.). It is perhaps this "subjectivity" that makes it possible for designers who are schooled in the new ethos built around empathy, interdisciplinarity, sustainability and human-centredness and who intuitively embrace technology, to provide creative solutions for the future.

Grefé (2007a: 2-4) points out that there is a tendency amongst educational institutions and design studios to think in terms of what additional skills or knowledge is required of a 'traditional' designer, when they should be considering a completely new model of designer who will be the standard in the not-too-distant future. Interdisciplinary teams of researchers, specialists and users working as codesigners supersedes the concept of designer as individual author, since this way develops the best solutions for end-users (Joost in Schmidt 2009:95). This acknowledges Grefé's 'new model' designer. Based on the predictions of the Designer of 2015 Competencies, these 'new model' designers entered their university training in 2011, and the imperative to make provision for their and the industry's needs is critical (Grefé 2007a: 2-4). Figure 1 is a visual correlation of the categories of graphic design in a curriculum and the outcomes attributes that need to be fulfilled by the curriculum.

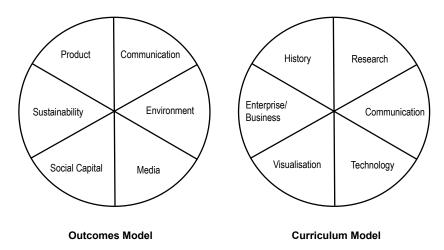


Figure 1: Correlation of design solutions and curriculum categories needed to deliver the solutions (Grefé 2007a: 8).

There is not a direct, linear relationship between the attributes identified in the "Outcomes model" and the categories identified in the "Curriculum model". They should be read as broad representative guides that advise how a curriculum should be built, so as to service the reflected outcomes. The other factor to consider is that the sizes of the pie-chart wedges are not a function of the weight or

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³ In this address to AIGA Boston in 2008, Davis is referring to the notion of computers as extensions of traditional tools and media. Her criticism is thus levelled at the those who see the teaching and learning that involves computers as developing a certain skill, proficiency, or know-how. The ubiquitous nature of the technology means that it is no longer an add-on to the creative process, rather it has transformed the cognitive perceptions and social practices of those who engage with it and is thus integral to that process. This rationale is in broad agreement with the product outcome approach to most design pedagogy.

equivalence of importance of the respective elements. "Sustainability", "Social Capital" and "Environment" are the 'new' entries in outcomes and reference the trends towards human-centredness previously absent in the old model of designer-centred, component-focussed design. The curriculum model introduces two new categories, not formally considered in vocational style programmes, namely "Research" and "Technology". These aspects are often implicit in programmes but need to be given appropriate emphasis and consideration in a formal curriculum structure.

Towards a new definition and a new destination

The discussion in this paper reveals an emergent awareness and changed sensibility that presents the designer of the future as someone who is comfortable in a variety of disciplines (and not just design disciplines). Designers are finding that they are required to solve problems that span a range of knowledge and experience. They must be able to synthesise solutions and use their creativity "beyond traditional boundaries of expertise" (Grefé 2007a). Ekuan (in Margolin 2002:98) adds to this the call for "interdisciplinary and international collaboration in all fields of design" as paramount to sustainability. Two further observations allow for review of the initial question, "What is graphic design?", and grow from the idea that the practitioner and the practice are interlinked. Davis (in Heller 2007: 6) adds that,

... as educators, we need to consider how we introduce students to reflective practice. How we actually slow down and pace the physical execution of work in order to design smart. How we teach students to find the intellectual challenge within the assignment that will sustain them... How we teach them and their clients to value the research component of a project just as much as they do... form-making on the computer. How we ask them to connect what they're doing in design to things people really care about.

Former South African Minister of Education, Kader Asmal (in Buchanan 2001:194-195) stated in a keynote address to design educators, at the Design Education Forum of Southern Africa Conference 2001, that "as a principle that embraces all countries in the emerging world culture of our planet, design is fundamentally grounded in human dignity and human rights" and pursuant to design engagement, whatever products are made should support this notion. This is a major tenet of the new design thinking that places human-centredness at the forefront of what designers do and should indeed be the first principle expressed in any design endeavour. As Buchanan (2001:194-195) states: "Human-centred design is fundamentally an affirmation of human dignity. It is an on-going search for what can be done to support and strengthen the dignity of human beings as they act out their lives in varied social, economic, political and cultural circumstances".

As further confirmation of the new design/designer ethos, the New Contexts/New Practices Conference, held at North Carolina State University in October 2010, set out to "generate and publish ideas about how design education will address the defining trends of contemporary practice and culture" (AIGA 2010:¶1) in response to the designer of 2015 competencies. This adds credence to the virtually impossible task of an encompassing definition for graphic design, defying categorisation and compartmentalisation. The realm in which design/designers operate is extremely diverse, and indicates a move towards more complexity as the channels through which designers communicate continue to grow. Designers should ascribe to values in their daily engagement with the world that develops their mastery of certain skills, understands the 'big picture', cogently accepts design as a vehicle for change and grows their worldview.

Thus, the pursuit of best practice in graphic design education should embody the essence expressed in the parameters listed below. Distilled from the views, trends, competencies and debates around graphic design discussed in this paper, these ten points serve as the guidelines for developing a best practice curriculum for the 21st century:

- Breadth of knowledge
- Collaboration
- Critical thinking
- Design principles
- Design systems
- Human-centredness
- Interdisciplinarity
- Sustainability
- Technical skills

Technological integration

So the question, "Are we there yet?" at NMMU seems to suggest that by default, rather than design, aspects of these guidelines are being applied outside of a formally constituted curriculum plan. With the need for HEQF compliancy, the opportunity presents itself to accommodate these parameters towards a best practice ideal, producing credible, relevant and vital curricula. This author contends that this will lead to teaching and learning enrichment as the designer's identity is clarified, a broader world view is encouraged, and curricula become more human-centred – that is an exciting destination.

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Short Biography

Bruce Cadle is a lecturer in Graphic Design at Nelson Mandela Metropolitan University. He has been an educator since mirror balls were invented, believes in the indomitable human spirit and that designers will (should) save the world. He is interested in the exciting possibilities that occur when design and art disciplines converge and new possibilities for synergy emerge.