

The acquisition of essential characteristics required for a contemporary graphic design career

by

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Abstract

In my eleven years of teaching graphic design at Tshwane University of Technology, I have come to realise that education is more than just teaching a student the fundamentals, techniques and new technologies, it is also about their personal development. I conducted this study to ensure that my educational practices challenge my graphic design students to acquire the essential characteristics – or more profoundly, the essential human qualities - required for a contemporary graphic design career through which the quality of life for all will be enhanced.

The study is a participatory action research study involving the second and third year graphic design students at Tshwane University of Technology. It involved five action intervention cycles. In the first cycle I explored the current graphic design education practices in order to determine whether these practices ensure the acquisition of such essential human qualities that a graphic designer should possess. The acquisition of such human qualities has become paramount because of the ethical imperative that graphic designers can change the world (Berman, 2009).

I found that my current graphic design education practices as they relate to the commonly most dominant practices are not sufficient to accomplish this purpose. During the research I was exposed to a paradigmatically innovative education practice that focuses on maximizing human potential and it was adopted to improve my existing education practice. Through four additional action intervention cycles I provided evidence that indicated that my improved education practice contributed to my students' acquisition of an identified four sets of essential human qualities: the artistic quality of creativity; the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative value based community of graphic design practitioners; the personal quality of maximizing human potential; and the leadership quality of an enlightened change agent. The primary focus on the

acquisition of these essential human qualities through the proposed method of graphic design education, also allows for the gaining of the necessary graphic design knowledge and skills (Barnett, 2007:101).

Keywords

Graphic design
Education practices
Authentic learning
Facilitating learning
Graphic design in society
Human qualities
Artistic qualities
Professional qualities
Personal qualities
Leadership qualities

Declaration

I declare that the thesis, *The acquisition of essential characteristics required for a contemporary graphic design career*, is my own original work and that to the best of my knowledge and belief it does not contain any material previously published or written by another person where due reference is not made in the text and by means of a comprehensive list of references.



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chapter 1

Introduction

1.1 Introduction

Education has long been a passion of mine, and any form of design has always caught my attention. In my eleven years of teaching graphic design at Tshwane University of Technology, I gradually have come to realise that graphic design education must be more than teaching students the fundamentals, more than illustrating techniques and demonstrating new technology in order for students to create graphic design products. When I looked at how graphic design influences the world we are living in – for the better and for the worse - I realised that, besides enhancing the professional development from student to professional graphic designer, graphic design students’ personal development from adolescent to young adult in our contemporary world has to become a major consideration. I, therefore, wanted to ensure that my educational practices would challenge my graphic design students to acquire the essential characteristics – or more profoundly, the essential human qualities - required for a contemporary graphic design career through which the quality of life for all could be enhanced.

Grant-Broom (2009:2) closely associates graphic design with visual communication. We are continuously bombarded with graphic design, and since the impact of visual communication on society is vast, her research emphasises the enormous responsibility of graphic designers and, inevitably, of the graphic design educators responsible for their education.

I conducted this study in order to ensure that my educational practices will enable students to fulfil their social responsibility. Therefore I start by describing the social dimension of graphic design.

1.2 The social dimension of graphic design

According to research done by Tan (2012:2) the idea of designing for social good has become prominent, especially since the beginning of the twenty-first century, amongst design communities worldwide. A reason for this is that: “[g]raphic design is a powerful medium that generates awareness and dialogue through its ability to communicate, educate, and inform” (Bryant, Schönemann & Karpa, 2011:155). Graphic design is driven by social, political and commercial messages; therefore graphic designers have the power to inspire social responsibility in the community through visual communication. Thus, a general reason why graphic design is important relates mainly to the effect it has on society.

Designers have influenced social behaviour for a long time, according to Girling (2012a), either through the visual communication of information or interesting, coherent brand stories. Thus, graphic design concerns itself with changing attitudes as well as emotions. Berman (2009:2) adds: “[d]esigners have far more power than they realize: their creativity fuels the most efficient (and most destructive) tools of deception in human history.”

However, in contradiction with the previous statement, Buchanan (1998:10) states that, “[d]esigners have struggled and lost more often than they have won in trying to influence their clients and the general public.” According to him this made many designers uncomfortable with their role in society.

Tan (2012:8) agrees with Buchanan because she found many critical voices towards the limits of design for social good in her research. For example,

Mulgan states the following weaknesses of design for social good (Tan, 2012:8):

- “The designer’s lack of economical and organisational skills.”
- “Their inability to drive the implementation process.”
- “The cost of design consultants.”
- “The ignoring of evidence and field experiences.”

These are accurate criticisms according to Tan (2012:8) due to the fact that there is still a significant amount to learn about this emerging area of design for social good.

It is obvious from these paragraphs that graphic designers have a great responsibility towards society, but it is not an easy road. According to Berman (2009:111), “[s]ocial responsibility is good for design because it will protect the profession” as well as the consumer.

The consumer, according to the Concise Oxford English Dictionary, is “a person who purchases goods and services for personal use” (Soanes & Stevenson, 2008:307). According to sociology, just about every society can be clustered into classes determined by things like wealth, income, occupation, education, achievement, seniority and many more. However, research has shown that no single variable, such as age or income for example, could truthfully forecast consumer purchases. According to research done in the United States of America by the Bureau of the Census, the nature of the family life cycle of buying behaviour has changed drastically over the past 20 to 30 years. For example, people wait longer to get married, thus childbirth is postponed, there are many more single-parent households and more adults are living with their parents than in the past (Russell & Lane, 1992:439-441).

SRI International, a research company, has divided the population into clusters of consumers. Each cluster can be identified by distinct behavioural and decision-making patterns (Russell & Lane, 1992:443-445):

- Actualisers
Actualisers, in short, “are successful, sophisticated, active, ‘take-charge’ people with high self-esteem and abundant resources”.
- Fulfillers and Believers: Principle orientated
Principle-orientated consumers, in short, “seek to make their behavior consistent with their views of how the world is or should be”.
- Achievers and Strivers: Status orientated
Status-orientated consumers, in short, “have or seek a secure place in a valued social setting”.
- Experiencers and Makers: Action oriented
Action-oriented consumers, in short, “like to affect their environment in tangible ways”.
- Strugglers
Strugglers, in short, “are constricted. Their interests are narrow, their actions and dreams limited by their low level of resources”.

These behavioural and decision-making patterns will undoubtedly have a significant influence on consumer culture.

Regarding the role of design within society, Peters (Berman, 2009:127) notes, “[d]esign creates culture. Culture shapes values. Values determine the future. Design is therefore responsible for the world our children will live in”. Correspondingly, Brown, Buchanan, DiSalvo, Doordan and Margolin (2013:1) state, “In a rich and complex world full of cultural diversity and social conflict, design often gives the essential interface between human conditions and purposeful actions”. With these quotes in mind, Mauger (2008:2) asks the following questions: “Have graphic designers not recognised their reliance on contextual knowledge derived from cultures of consumption? Is it implicit in their practice and unrecognised?”

Design played a crucial role in the growth of the western economy during the twentieth century. According to Girling (2012b:2): “An unanticipated outcome of that commercial success was designers unwittingly contributed to the rise of highly wasteful consumerist culture – which has put us on an unsustainable cultural and environmental trajectory.” Design has become obsessed with the creation of temporary luxurious and beautiful designs, without truly inquiring if they will improve human life. However, Girling (2012b:2) believes that, since designers, including graphic designers, play a critical role in shaping cultural attitudes and behaviours, they would be able to reverse this impact.

In order to reverse this impact, graphic designers need to recognise that they reflect social contexts and mediate them through design. Therefore, graphic designers need to understand consumer culture, as well as the way in which consumers select products and choose lifestyles (Mauger, 2008:3).

Buchanan (1998:5) adds to this by asking the following question: “if there is no unifying ideology shared by the design community and world culture as a whole, where does the individual find identity and moral purpose?” After studying Branzi’s dilemma which concerns itself with finding identity and moral purpose when central values are essentially contested, Buchanan (1998:3-8) concludes that nobody possesses all the knowledge and wisdom required to understand and act responsibly. According to him we need diversity and alternative perspectives in order to order, disorder and reorder and for designers to avoid narrow thinking.

Buchanan’s (1998:8-9) concerns about narrow-minded designers relate to the inclination of people to avoid questioning themselves and objectively examine the consequences of their beliefs and actions on others. Hence, designers should be critical of their role even if they have a limited influence on society.

With regards to this questioning, graphic design may play an undeniably crucial role in consumer culture, but this culture also refers to society as a

whole. Within this context, Frascara (1988:21) indicates that graphic design impacts on and influences users and the environment through visual communication within the community. This visual communication in the form of “[d]esign should be about meaning and how meaning can be created. Design should be about the relationship of form and communication”.

Bennett (2012:73-74) adds to this by describing good design in her article by means of the following quotes: “good design is good for business” by Thomas Watson Jr., “good design is good will” by Paul Rand and “good design is good citizenship” by Milton Glaser. She found that for Thomas Watson Jr., design empowers business and transcends social concerns and for Paul Rand good design is a corporate design outcome where quality is inspired by the individual’s creative inspiration. However, Rand also includes human values in his description of good design, which touches on Glaser’s focus of citizenship. According to Glaser’s mantra, the designer plays an important role in effecting good design through high moral and ethical values. This calls for an awareness and concern for social impact.

Therefore, Bernard (2009) believes a graphic designer should take their own specific action as an individual who is part of society. As Maxim Gorky (Bernard, 2009) notes, “[l]ife will always be hard enough to prevent men from losing the desire for something better”. Bernard (2009) continues by stating: “[t]he graphic designer’s social responsibility is based on the wish to take part in the creation of a better world.”

Graphic designers structure themselves in an independent and expanded manner in order to be in direct contact with different societies around the world, thus having a relation to a global society. However, what if the moral values on which graphic design was founded disappear in favour of successful marketing? It is crucial that these values must be encouraged and maintained in order to see them “flourish openly within the different social realities to come” (Bernard, 2009).

It can be argued that graphic design has an inevitable influence on society and that moral values are fundamental in order to be an ethical graphic designer.

1.3 The social challenge of graphic design: The ethical imperative

People in society can recognise word-based lies, although their visual literacy is relatively low. Consequently, when images are telling a lie it is less obvious to most people. It is also vital to note that a well-crafted visual lie can be far more powerful than a word-based lie, due to the fact that images provoke subconscious, intuitive reactions. Thus, people often do not realise that they are being manipulated (Berman, 2009:121).

This manipulation can now be proven by hundreds of scientific studies that document human cognitive biases. These biases are the result of mental shortcuts that lead people, especially as consumers, to make decisions that are more emotional than rational (Girling, 2012a).

According to Girling (2012a), the recently acquired knowledge on how the brain works is a significant step forward, although there is much more to discover on persuasive design. We will learn a lot during the next century, which will have a dramatic impact on several design disciplines.

Thus, according to Berman (2009:105), “the timing has never been better – or more profitable – for responsible design”. Ethical design and promotion can be the most effective marketing tool, says Berman, since client and designer can make more money in the long term by making a promise to the customer that will be fulfilled. It is essential as well as ethical to get “excellent products into the hands of consumers with tangible needs, through clear communication that delights and informs” (Berman, 2009:107). This is strategic, profitable and sustainable business.

It is apparent from these paragraphs that it is vital that graphic designers become responsible designers. Although design for social good is a relatively new field there are already many initiatives in order to explore this field. A common starting point for these initiatives is the creation of design manifestos. These manifestos are written declarations where designers frame their vision for design to positively impact on social issues (Tan, 2012:5). The International Council of Graphic Design Associations, the International Federation of Interior Architects/Designers and the International Council of Societies of Industrial Design announced a joint declaration in 1983: “a designer accepts professional responsibility to act in the best interest of ecology and the natural environment” (Berman, 2009:137).

Many codes of ethics followed this declaration, but in the year 2000 the Society of Graphic Designers of Canada adopted a courageous and progressive national code of ethics. According to Berman (2009:137), this code of ethics is “standing on the shoulders of many inspiring documents from around the world”. In terms of this code, professionalism includes a commitment to social and environmental responsibility.

What follows are some highlights, quoted from the Code of Ethics of the Society of Graphic Designers of Canada (Berman, 2009: 160):

31. “A Member, while engaged in the practice or instruction of graphic design, shall not do or fail to do anything that constitutes a deliberate or reckless disregard for the health and safety of the communities in which they live and practice or the privacy of the individuals and businesses therein. Members shall take a responsible role in the visual portrayal of people, the consumption of natural resources, and the protection of animals and the environment.”
32. “A Member shall not accept instructions from a client or employer that involve infringement of another person’s or group’s human rights or

property rights without the permission of such other person or group, or consciously act in any manner involving any such infringement.”

33. “A Member shall not make use of goods or services offered by manufacturers, suppliers or contractors that are accompanied by an obligation that is detrimental to the best interest of his or her client, society or the environment.”
34. “A Member shall not display a lack of knowledge, skill or judgment or disregard for the public or the environment of a nature or an extent that demonstrates that the Member is unfit to be a Member of the Society of Graphic Designers of Canada.”
35. “A Member shall not contract directly with the client of his or her client or employer without obtaining the permission of his or her client or employer to do so.”

These codes of ethics were responsible for the fact that graphic designers in Canada are subject to government-sponsored certification, an example that has been followed by many other countries (Berman, 2009: 164).

However, there is no guarantee that even the best ethical code will ensure responsible professional graphic designers. Graphic designers must be educated from the beginning to be responsible in their design careers.

1.4 The challenge for graphic design education

Hargreaves (1994:262) states: “[t]he rules of the world are changing. It is time for the rules of teaching and teachers work to change with them.” These changes are vital for graphic design education as well, especially since graphic design has penetrated all areas of life and is changing rapidly. In this regard, the contextual base for design has become a primary consideration in

the academic design community. Design educators place importance on understanding the social context in graphic design thinking and, from the field of business, the emphasis is on understanding the cultures of consumption related to marketing and brand development (Mauger 2008:2-3).

As mentioned before, graphic designers have the potential power to inspire social responsibility in the community through visual communication. It is essential, according to Bryant, Schönemann and Karpa (2011:155), that students are exposed to this potential in order to broaden the scope of their graphic design profession. It is arguable that pressing issues, for example climate change, can encourage social responsibility. Social and commercial content should be part of graphic design education in order to ensure that students understand the potential effect of design on society. Thus, it is extremely important that graphic design students comprehend the relevance and impact of the graphic design industry on both responsible business practice and the community at large.

In further motivation for change in methods of graphic design education, Swanson (1994:57) notes, graphic design education does not prepare students to “become thinking people who can help shape a democratic society”. Graphic design education serves no purpose beyond a graphic design career and therefore it cannot be seen as education, since it is narrow, specialised training. Goldstein (2012:104) adds that graphic design educators must not teach students to be servants to clients, because then they are taught to be employees and not graphic designers.

It is also essential to realise that some of today’s professions will not exist in fifteen years from now, and the professions that will exist then do not exist at present. Graphic design is no different. There probably will be graphic designers, but they will very likely do something different than what is currently done in graphic design (Swanson, 1994:57).

Therefore, graphic design educators must be careful not to teach the graphic designers of the twenty-first century how to be mid-twentieth century graphic designers (Swanson, 1994:58). Educators should rather focus on the understanding of social context in graphic design thinking, as well as in the field of business. The emphasis should be on understanding the cultures of consumption related to marketing and brand development. Both graphic designers and educators in graphic design will benefit from knowledge of the social context that informs design, especially the importance of cultures of consumption in design practice (Mauger, 2008:2-13).

To assist in this Van der Waarde and Vroombout (2012:35) suggest the graphic designer and graphic design student ask the following questions in order to reflect on the ethical component of a practical project:

- “Am I allowed to use this typeface?”
- “Could it harm people if I portray them like this?”
- “Does this chart really reflect all data?”
- “Is this a suitable identity for a commissioner?”
- “Is the information contents correctly represented?”
- “Does the structure lead or mislead the beholder?”
- “Does a design really enable an appropriate dialogue between commissioner and beholder?”
- “Which beholders are excluded by this format?”

To conclude, the primary task of graphic design education, according to Swanson (1994:61), is to find a balance between the training of skills and the general understanding that will benefit students, the graphic design industry and graphic design professionals.

To complement this, Goldstein (2012:190) developed a design education manifesto for students in design in order to ensure that they get the most out of their learning experience, and from their lives as creative professionals. Even though the manifesto is aimed at students, it also is important that

lecturers in graphic design bear these suggestions in mind in order to challenge their students to reach their highest potential.

This manifesto encourages students to always take risks in their designs, to be aggressive designers and to break design rules, to look at everything and dismiss nothing, to be obsessive because “obsession is the mother of invention”, to be uncomfortable, but also opinionated, and to be dedicated to work like a police officer “on duty 24/7/365” (Goldstein, 2012:190-191).

These paragraphs highlight the complexity of graphic design education due to the changing nature thereof, and the social responsibility of graphic design education. Maybe this complexity and social responsibility calls for a different approach to graphic design education, where the focus is on things like competence, qualities and dispositions. This background brings me to the motivation for this study, as well as the problem statement.

1.5 Problem statement and motivation for the study

The question that came to my mind was: “Am I preparing students to become only graphic designers in a technician way, or am I preparing them for their participation in the community of graphic designers with the responsibility that they will have in society?”

I realised that when I teach students to become graphic designers and supply them with fundamentals, technical preparation and physical skills only, one very important ingredient is missing. That ingredient is the person, and the person cannot be divorced from their environmental space-time context. We live in a globalised world and in a post-modern era. These two dimensions are inextricably linked. One must thoroughly consider the post-modern student in a globalised world in order to ensure personal and professional development that will enhance the character of society.

1.6 Research question

The primary question of this study is:

- How can I ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

1.6.1 Subsidiary questions

In order to answer the primary research question, the following questions will be addressed:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

1.7 Layout of the study

This study describes an action research process with the intention to ensure that graphic design students acquire the human qualities that are essential for a career that enhances quality of life. The description of this process comprises five interrelated chapters.

Chapter 1 presents the introductory orientation and provides the background to substantiate the study. It also includes the problem statement and the research questions.

Chapter 2 consists of a comprehensive literature study. The literature study describes design as a whole, as well as graphic design as a design discipline. Graphic design education and its requirements are another discussion point in the chapter. The chapter concludes with some reflection on traditional teaching methods.

Chapter 3 frames the research design, with specific emphasis on the research methodology, population, sample and data collection techniques. The interpretation and verification of data, as well as the limitations and challenges of the research, are considered.

Chapter 4 provides the core findings of the empirical study, including the collected data, the analysis, the interpretation and the reporting thereof. Specific attention is given to the teaching interventions used in the different cycles of the action intervention, as well as how students experienced these methods. The acquisition of the essential human qualities is also investigated in this chapter.

Chapter 5 highlights the conclusions of the empirical study and presents the recommendations as derived from the research.

1.8 Recapitulation of comments

This chapter gave a background to my personal interest in graphic design, the scope of graphic design as well as the social dimensions thereof. It also emphasised the problem statement, thus providing the reader with my motivation for conducting the study. It also provides some insight into the main research question and the subsidiary questions.

Chapter 2 consists of a comprehensive literature study. This literature study will focus on design, specifically graphic design, and the teaching thereof.

chapter 2

Literature Study

2.1 Introduction

Chapter 1 focused on the motivation for and problem statement of the study, namely whether I am preparing students to become only graphic designers in a technician way, or whether I am preparing them for their participation in the community of graphic designers with the responsibility that they will have in society?

In order to properly answer this question, I undertook a comprehensive literature study, which is set out in Chapter 2.

2.2 Background

Graphic design appears to have an ancient origin. Since humankind has produced these images, anthropology seems to be an apt starting point to studying graphic design because it shows that early cave art can be seen as the origin of the expression of human intelligence, imagination and creative power in the form of visual images (De la Croix, Tansey & Kirkpatrick, 1987:28). Cave art started more than 200 000 years ago, according to Meggs (1992:4). However, the period between 35 000 B.C. and 7000 B.C., known as the Upper Palaeolithic period, revealed an apparent motive for the creation of

these images. The motive most likely revolved around food (De la Croix, Tansey & Kirkpatrick, 1987:28). The images represented their prey and, in many cases, also the method of obtaining it – hunting and gathering. The images may have been for functional purposes like identification, hunting/gathering methods, food preparation, ritualistic preparation for the hunt to be successful and celebration after the hunt.

Huppatz (2010) agrees with Meggs (1992:4-5), who describes the Upper Palaeolithic period as the beginning of visual communication, because these images were created for survival, thus as a representation of prey and hunting/gathering methods. These images therefore most likely served as teaching aids.

In short, these cave dwellers became aware of the fact that they had to survive. Their problem of survival needed a solution. Through a process of conceptualisation, cave images and symbols were an innovative solution to their survival problem.

Cave art consequently can be seen as the first step in design, where humanity used intellect, imagination and creativity as key components, not only in the images themselves, but also in the “tools” used to make cave paintings.

The preceding paragraphs describe the history of humanity and seem to indicate that graphic design was necessary for survival and/or to improve quality of life - and thus the human race and graphic design became inseparable.

If the human race and graphic design are as inseparable as the preceding paragraphs suggest, then it follows that graphic design is not fully comprehensible without considering the needs and purposes of the human being. However, in order to make comprehension possible, distinction is the key. For this purpose we will explore what the “design” in graphic design entails, starting with a history of design.

2.3 A history of design

Cave painting was the first form of design, but one must bear in mind that the “tools” used for cave painting were also a form of design.

For light, the Upper Palaeolithic cave painters used stone lamps filled with marrow or fat. The wick was probably moss. They used chunks of red and yellow ochre to draw with, and ground these same ochres into powder, mixed with animal fat, for painting. They used a flat bone as a palette and reeds or bristles as brushes. They also used a sharp flint point for engraving (De la Croix, Tansey & Kirkpatrick, 1987:29). Furthermore, as Meggs (1992:4) points out, they also used charcoal for black, and also painted with their fingers.

The Mesolithic period (7000 B.C. to 4000 B.C.) was characterised by rock paintings depicting human figures (something that was rarely seen in the Upper Palaeolithic period). These figures were presented in large groups in a wide variety of poses, subjects and settings (De la Croix, Tansey & Kirkpatrick, 1987:29).

More signs of design become visible from these rock paintings, not only in the different poses and settings, but also in the variety of “tool design” (used for hunting) evident from the paintings.

Another important characteristic of the rock paintings of the Mesolithic period is the fact that these paintings became more abstract and schematic, in other words more symbolic than pictorial. According to De la Croix, Tansey and Kirkpatrick (1987:37), this led to the invention of writing.

Writing is a very important aspect of design, which is why the invention of writing needs some discussion.

Civilisation started once the Sumerian people arrived in Mesopotamia close to the end of the fourth millennium B.C. Life in Mesopotamia was dominated by religion. According to Meggs (1992:6), writing may have developed because the temple had a desperate need for record keeping due to theft.

In other words, people become aware of a problem, and in this case the problem was theft. Their innovative invention/design of writing in order to keep record was their solution or “product”.

The earliest written records are tablets from the city of Uruk, dated about 3100 B.C. These clay tablets contained pictographic drawings of objects, as well as numerals and personal names inscribed in orderly columns. The fine lines were done with a reed stylus sharpened to a point, and the pictographs were done with a wooden stylus. Around 2800 B.C., Sumerian scribes turned pictographs on their sides and began to write in horizontal rows, from left to right and top to bottom. This made writing much easier (Meggs, 1992:7).

From this it is clear that the main purpose of design in these early years was to discover a solution to a specific problem in order to ensure survival or improve the quality of human existence.

2.4 Humanity and design

The previous paragraphs provide some history of humanity and design and conclude with the fact that design is necessary for survival and to improve quality of life.

Through the years it has been said that the proper study of mankind is to be man. But, according to Simon (1996:138), the complexity of human behaviour may be drawn from the environment and the search by man for good design. Therefore, Simon (1996:138) concludes that “the proper study

of mankind is the science of design” (Atwood, McCain & Williams, 2002; Buchanan, 1992; Cheverst *et al.*, 2001).

Thus, the human race and design are inseparable, and therefore this research study must first provide an overview of humanity and design before graphic design education can be discussed.

Iannaccone (2001) is of the opinion that, as the eras of cave painting and the invention of writing, the era we currently are living in will possibly be another major turning point in history. Developments in electronics, information processing and communication will not only have an influence on technology, but also in all other areas of life. These areas include: art and culture, human relations and education, finance and lifestyle, insight and cosmology. All of this will have a great impact on what it means to be human.

This shows that humanity has changed and that it is still changing today. These changes can be positive and beneficial, but there may be concerns as well.

One of the concerns, according to Steiner (Iannaccone, 2001), is the effect of the revolution in tool design and production techniques. Although machines are very precise in the replication of a product, the dynamic and living quality of the product is lacking. These aesthetic values are not only present in visual arts, but also in nature and in human activities and creations.

Several philosophers in the late nineteenth century were concerned that the machine would separate the connection between value and substance. They were of the opinion that uncomplicated tools, designed for the human hand, create a more visible connection between the world of thought and value and the world of matter. These tools allow humans to create products with a unique kind of “honesty” (Iannaccone, 2001; Ross, 1984).

This can be applicable to all aspects of life, including design.

2.5 Design

As Brown, Buchanan, Doordan and Margolin (2012:1) note, “Design is constantly changing; hence, attempts to construct design theories are challenging”. However, according to them there is a long tradition of reflection on the act of designing, considering the nature of design knowledge and how it is applied.

Thus, the question remains, what is design? Rosenman and Gero (1998:161) answer this question as follows: “[d]esign is a purposeful human activity in which cognitive processes are used to transform human needs and intent into an embodied object. Humans operate in a socio-cultural environment, whereas artefacts form part of an artificial or techno-physical environment, the two being integrated into a socio-technical environment. Design is about the transition of concepts from the socio-cultural environment to the description of technical objects.” This definition stresses the fact that the design must be functional, but it does not stop there. The following quote emphasises the importance and actuality of design very clearly: “[d]esign is so obvious, it is almost invisible. Like the air we breathe, it surrounds us and is critical to our disposal” (Slafer & Cahill, 1995:6). In addition to the functionality, importance and actuality of design, Buchanan (2000) presents the following descriptive definitions:

- “Design is the humanising of technology.”
- “Design is marketing things right.”
- “Design is the glimmer of God’s eye.”

Apart from the functionality, importance and actuality of design, the descriptive definitions also show that design needs intelligence, imagination and creative power. Intelligence is vital in order to use technology. Imagination and creative power are necessary to “market things right”, in other words to sell a product. When intelligence, imagination and creative power come together it can be like the glimmer of God’s eye.

In order to further clarify design, a working definition of the term was developed at a meeting held on Friday 22 October 2004 at the Arts Faculty of the Tshwane University of Technology: “[d]esign is the innovative conceptualisation of the optimal and aesthetic use of given and/or developing materials to solve problems in society, reshape society and/or improve society. This conceptualization is presented in the form of an innovative, conceptualised blueprint with detailed instructions for manufacture” (Krause, 2006:129). To further refine this definition, the participants at the meeting all agreed that design is not replication, manufacturing or for mere use. They felt rather that design is innovative, criteria driven, fit for purpose, uses materials optimally, progressive, the opposite of replication, the step after the mastery of manufacture, and experimentation by moving from the known to the unknown while testing it and pushing the aesthetic, material and conceptual limits.

To summarise, design starts with an awareness of a problem. The problem can be solved through the process of design, as illustrated in Figure 2.1.

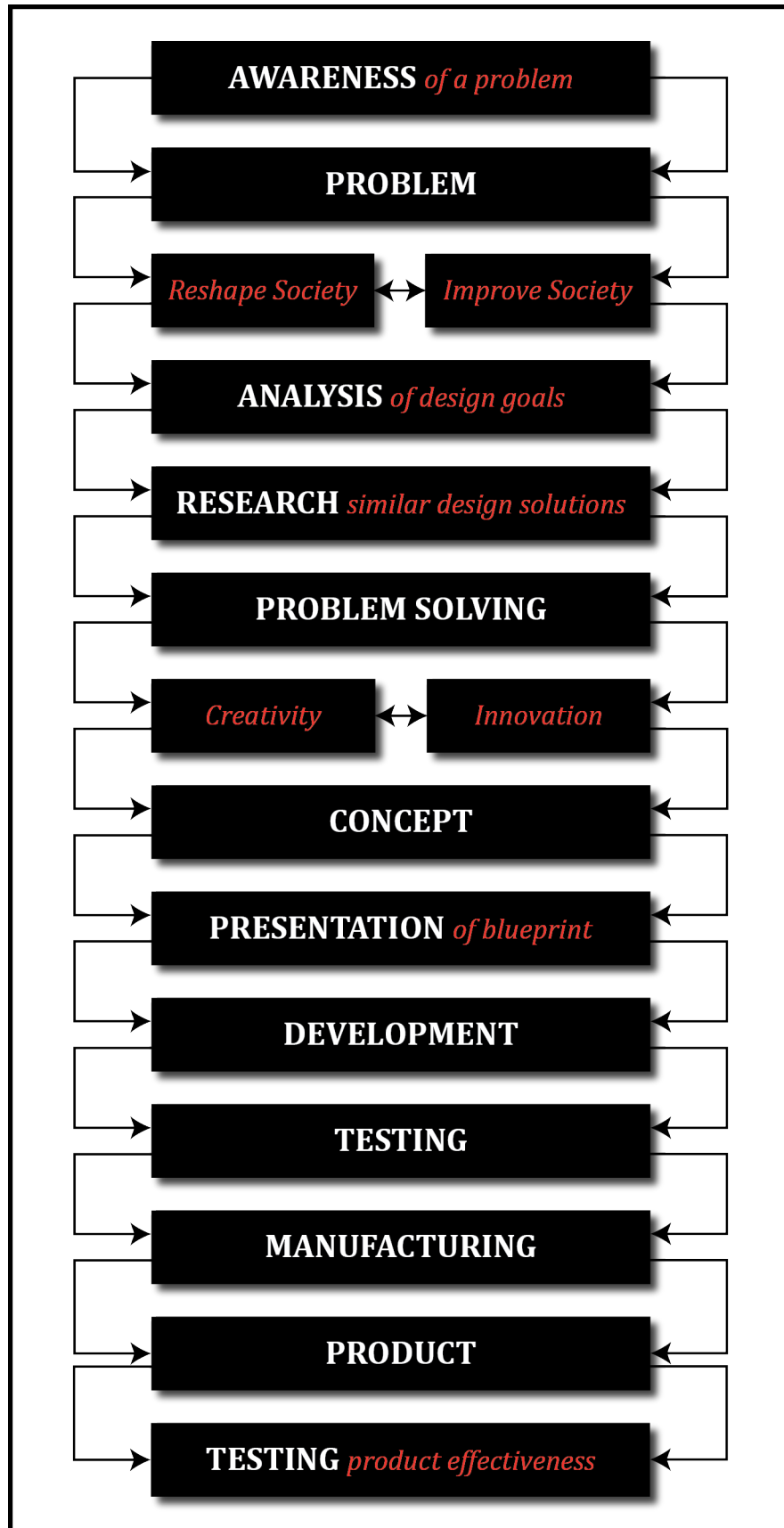


Figure 2.1: Design process

In a 2008 survey undertaken by THINK (the South African Communication Design Council) on the state of design in South Africa, a definition for design was developed. The Council describes design as “the intellectual, technical and creative activity concerned with the creation, development and delivery of an object, an event, a concept or a process” (THINK, 2008:7). In this sense, and according to the Concise Oxford English Dictionary, a concept is “an abstract idea; an idea to help sell or publicize a commodity” (Soanes & Stevenson, 2008:296). The Council also mentioned other definitions that came from focus groups during their research. Although the definitions all differ, there were certain key words in the majority of the definitions supplied. These include words like “creation, development, putting together, to make something or conceptualizing (to form a concept or idea of something”. The majority of the respondents were of the opinion that design is the creation of something that leads to a “visually stimulating” product that should be “appealing” to the customer (Dede, 2009; THINK, 2008:10).

Therefore, design is a process. This process needs intelligence, imagination and creative power in order to be functional. To be functional, the finished creation of the design process must be a product. This product will fall into one of the disciplines under the design umbrella.

There are a variety of disciplines under the design umbrella, including the following, amongst others (Design Council, 2010:19-28; Whyte & Bessant, 2007:10):

Communication/Graphic design	This includes graphics, brand, print, information design and corporate identity
Product and industrial design	This includes consumer/household products, furniture and industrial design (including automotive design, engineering design, medical products)
Interior and exhibition design	This includes retail design, office planning/workplace design lighting, display systems and exhibition design
Fashion and textiles design	This includes fashion and textiles

Digital and multimedia design	This includes website, animation, film and television identifications, digital design and interactional design
Other	This includes advertising, aerospace design, building design, engineering design, landscape design, jewellery design and mechanical design

Table 2.1: Design disciplines.

Thus, design is a human activity or process that requires intelligence, imagination and creativity in order to create something functional and valid. The functional product will be created by means of one of the various design disciplines described in Table 2.1.

However, even though this design process is extremely important it is still just one aspect of design. According to Brown, Buchanan, Doordan and Margolin (2011:1) “the core of design remains in the mind and imagination – and in the discipline of professional practice.”

Drost (2008:4-5) thinks that we should reconsider what we consider design to be, this includes the nature of the object, the character of the tools and methods that we aim to create and the way in which we create them. According to him one must first describe the object that is the “content” – the design problem and the emerging design solution. This description will be followed by the actor, which is the designer, the design team or organization. The context wherein the activity takes place will be next and lastly the structure and dynamics of the design process.

If one combines all the activities as suggested in the preceding paragraphs, namely intelligence, creativity, the nature of the object, the design tools and methods, the content and the designer and/or the design team it indicates that design is a contested domain of conceptions, principles and values.

Drost (2008:5) indicates that it is fairly easy to explain the design process model to students, but knowing the model will not make a student a designer.

He suggests that design education must focus on all these other aspects of design as well. He is of the opinion that the focus on the design process only is holding designers back from a deeper understanding of the design activity itself.

This understanding is vital due to the changing nature of contemporary design. William Gibson notes in this regard: “[t]he future is already here. It’s just not very evenly distributed yet” (Friedman, 2012:136).

According to Buchanan (1998:3) fundamental changes have taken place over the last two decades within the design landscape and these changes continues to unfold due to the gathering force in directions that few people can anticipate.

These changes are due to the change to the twenty-first century economies – an economy of direct material technologies as described by Friedman (2012:143). According to him these technologies use materials and technology through direct instruction to shape artifacts. This calls for increasing improvements to products and services. Thus, design activities are changing.

Drost (2008:7) agrees that the design activities of professional designers are changing. According to him it is due to the effect of globalization, the digital age, the need to create a sustainable world, and the fragmentation of the value systems within western societies. These changes are increasing the complexity of the challenges that designers have to deal with and for this reason designers need to incorporate valuable research into their professional design practice. Thus, designers cannot just design.

Fortunately some designers prefer to see the current design direction and they act accordingly. However, one must keep in mind that the direction of design is not exclusively in the hands of the designers. The cultural framework within society will also determine the design direction. This

includes the altering attitudes of the public, the environment of corporations and the understanding of all the professions with which designers must collaborate (Buchanan, 1998:3-4).

For these reasons contemporary designers started to shift their work away from images and physical objects, they rather place design explicitly in the context of strategic planning where the design is present at the earliest moment in the product design process. Thus, being part of the fundamental decisions regarding the circumstances and ends to be followed. This can be seen as the repositioning of design as a central agency of being human in contemporary culture. This is not abandoning the design disciplines of communication and the creation of images or physical objects, it rather puts communication and creation in the context of action with designers serving as collaborators in determining public, corporate and private plans for action (Buchanan, 1998:12).

To add to this Bjögvinsson, Ehn and Hillgren (2012:102) state “that a fundamental challenge for designers and the design community is to move from designing ‘things’ (objects) to designing Things (socio-material assemblies)”. According to them this movement involves the challenges of engaging stakeholders as designers as well as challenges of designing beyond the specific project and towards the future stakeholders as designers.

Thus, according to Buchanan (1998:17), the contemporary world of the design disciplines of communication, construction and strategic planning are given new expression and development through the integration of different knowledge and the participation of many people with different backgrounds and perspectives. In order to do this Friedman (2012:144) suggests that design professionals require a range of skills and knowledge that includes the general skills and knowledge that all practicing professionals need as well as domain-specific skills and technical skills within each professional practice.

These paragraphs describe the changing nature of contemporary design and one aspect that is clear “is the fact that designers must learn more than they once had to learn to succeed in a first-rate design program. When they graduate, they must know more than they once had to know to work at the upper levels of the profession, and they require a higher level of integrative skills to succeed” (Friedman, 2012:144).

It is clear that contemporary designers must create value for industry and business and therefore Friedman (2012:146) suggests that the education of these professionals needs two kinds of education. The one is specialty training on the advanced skills within a specific design practice and the other one is broad training, which includes all kinds of thinking and knowledge that designers will need in a wide range of professional engagements.

These kinds of education call for a discussion on the theories of design knowledge and design education. Merriam-Webster (1993:647) describes knowledge as “what is or can be known by an individual or by mankind. Knowledge applies to facts or ideas acquired by study, investigation, observation or experience.” To add to this quote, Gregory Bateson (1984:41) states “information is any difference that makes a difference.” Therefore “the power to make a difference defines the difference between information and knowledge” (Friedman, 2000:12). The importance of design knowledge is observable from these quotes.

Design knowledge, according to Friedman (2000:25) must be considered against the background of the large cultural, social and economic trends. Friedman (2000:10-11) presents four domains, namely skills for learning and leading, the human world, the artifact and the environment which all offer a useful framework for considering design knowledge.

The first domain, skills for learning and leading, consists of problem solving, interaction method, coaching, mind mapping, research skills, analysis, rhetoric, logic, mathematics, language, editing, writing and presentation

skills. The second domain, the human world, involves the human being, the company, society, the world and theory basics. The third domain, the artifact, incorporates the product development, design and manufacturing. The last domain, the environment, includes the natural environment, built environment, architecture, interior and installation (Friedman, 2000:11).

It is clear from this explanation that systematic thinking is required, especially in the design process, to work with the relationships between these domains of design knowledge. Therefore, the process of design must involve the theoretical disciplines as well as the field of practice (Friedman, 2000:10-13). Swanson (1994:59) describes it as one of the fields where science and literature meet in order to shine a light on sociology and history.

2.6 Graphic Design

When the focus is turned from design in general to graphic design as the concern of this research, the origin of graphic design might be crucial to explicate its conceptualisation.

2.6.1 A history of graphic design

Since the beginning of time, people have tried to find ways to give visual form to ideas and thoughts in order to store knowledge in a graphic form, and to bring order and clarity to information. In history, scribes, printers and artists were usually appointed for this task. But it was only in 1922 that William Addison Dwiggins invented the term “graphic design”. He was an exceptional book designer and he used the term “graphic design” to describe his activities. He expressed his activities as bringing structural order and visual form to printed communications (Aynsley, 2000; Jacob, 1998; Meggs & Purvis, 2006:ix; Thomson, 1994).

Thus, graphic design has existed since prehistoric times, but that it has only been referred to as graphic design since 1922. For this reason Triggs (2011:3) is of the opinion that the history of graphic design is less established than that of other design disciplines.

2.6.2 What is graphic design?

The majority of people are exposed to graphic design in abundance, although they are unaware of it. For example, most people will see the colours, shapes and typography on their toothpaste tube, the symbols on taps and showers, and the packaging of their tea or coffee even before they are fully awake in the morning. They may also see station logos on the television, as well as the print, photography and layout of a newspaper. This is before they get into their cars, where they will see another logo and a collection of pictures and symbols. The list is endless because graphic design is everywhere (Barnard, 2005:1; Giunta, 2000; Grant-Broom, 2009:2). This shows that graphic design is woven into people's lives, and why it is very difficult to describe graphic design with just one definition.

Barnard (2005:10) is also of the opinion that it is difficult to find a satisfactory definition or explanation of graphic design. He decided to use etymology to better understand the term "graphic design". He found that the word "graphic" was drawn from the ancient Greek word *graphein*, which means "mark-making". The term "mark-making" covers written and drawn marks. Marks in this context can be explained as "a line, figure, or symbol made as an indication or record of something" (Soanes & Stevenson, 2008:874). In relation to the word "design", Barnard (2005:10) found that the word entered English from the Renaissance French word *dessiner* and later from the Italian word *disegno*, which means drawing, planning, sketching and designing, but the root is the Latin word *signum*, which means "a mark". From this one can see that there is some overlapping between the

words “graphic” and “design”, and it is evident that drawn marks are common to the definition of both “graphic” and “design”.

Isarankura (2011) agrees with Barnard (2005:10), who believes that the above definitions generate a very wide range of activities that might be called graphic design. These activities include communication arts, communication design, illustration and visual communication. To further emphasise the fact that graphic design includes a wide range of activities, Newark (2002:6) states that graphic design is the most universal of all the design disciplines. It is everywhere, explaining and decorating, while imposing meaning on, the world.

The activities stated above (communication arts, communication design, illustration and visual communication) must, in other words, all be functional in order to be called graphic design. For these activities to be functional and valid, human intelligence, imagination and creative power will be imperative.

Newark (2002:12-13) continues by expressing how difficult it is to reduce such a wide-ranging and variable activity into a brief definition. For this reason he quotes several definitions from different authors in the hope that these might add up to some kind of whole:

“Graphic design is the business of making or choosing marks and arranging them on a surface to convey an idea” (Richard Hollis)

“... graphic design, in the end, deals with the spectator, and because it is the goal of the designer to be persuasive or at least informative, it follows that the designer’s problem are twofold: to anticipate the spectator’s reactions and to meet his own aesthetic needs” (Paul Rand)

“Whatever the information transmitted, it must, ethically and culturally, reflect its responsibility to society” (Josef Muller-Brockmann)

Hollis (Newark, 2002:12), on the other hand, describes graphic design by means of three of its functions:

- Identification: to say what something is, or where it came from (in signs, banners and shields, masons' marks, publishers' and printers' symbols, company logos, packaging labels).
- Information and instruction: by presenting the relationship of one thing to another in direction, position and scale (maps, diagrams, directional signs).
- Presentation and promotion: where it aims to catch the eye and make the message memorable (posters, advertisements).

However, Newark (2002:12) has a problem with the allocation of these functions into categories, as described by Hollis. Newark is of the opinion that it is misleading, because a poster, for example, identifies, instructs and promotes all at the same time, and a logo also identifies and promotes simultaneously. Therefore I would suggest that it is safer not to divide graphic design into categories, but rather to look at the products of graphic design.

From the preceding definitions one can conclude that it is an almost impossible task to sum up graphic design with just one definition. However, some aspects are inseparable from the term graphic design:

- Communication
- Designing (mark-making, drawing, sketching, etc.)
- Production
- Explaining/instruction
- Decorating
- Information

- Identification
- Promotion/presentation
- Economic role/commercial nature
- Ethical and cultural responsibility

However, activities like these fit in with the more traditional definitions of graphic design. There is, according to Harland (2011:22), since the turn of the century a broader appreciation of graphic design's real potential as a profession, field and discipline. He feels that graphic design has been constrained by such definitions. Thus, Harland introduced a different set of terms to describe graphic design. These terms focus on how graphic designers think and act during idea generation, image creation, word interpretation, and media awareness for industry, culture and society. Communication theories, models, methods and practices can also be added to this description.

The above description clearly identifies again the complexity in describing graphic design. Harland (2011:24) asks the following question in this regard: "Should there be a concern about how language is used to describe what graphic design is? Perhaps there should be if that language limits an understanding about how far a subject can be appreciated and developed." Thus he concludes that "[l]anguage to describe graphic design therefore must be a contemporary concern, and it needs the urgent attention of those concerned with graphic design."

In Harland's (2011:25) paper he proposes that graphic design is "a unified process of idea generation, word interpretation, image creation, and media realization for social, cultural, industrial, and commercial contexts." However, according to him, this is just a starting point for the development of future definitions for graphic design. An investigation of the elements of graphic design might bring clarity to the characteristics of graphic design.

2.6.2.1 The elements of graphic design

Graphic design can be seen as a member of the visual arts (Jackson, 2008:64). According to the Concise Oxford English Dictionary, the word visual is related to seeing or sight. It can also be “a picture, piece of film, or display used to illustrate or accompany something” (Soanes & Stevenson, 2008:1616). The word art, on the other hand, is “the expression or application of creative skill and imagination, especially through a visual medium such as painting or sculpture” (Soanes & Stevenson, 2008:73).

Visual art therefore is the expression or application of a creative skill and imagination. Wei and Loho-Noya (2009) and Sinatra (1984) agree with Shashi (2003) that imagination is the ability by which people bring nonexistent objects and perceptions forcibly before the mind. Imagination and creative skill cannot be seen as the same thing. Imagination is fundamental to the nature of being human. Creative skill is the making of something new, normally, but not necessarily, by using imagination. The difference is evident. Imagination is not about creatively rearranging existing matter, but about bringing forth that which we all dream about and have not (yet) given form to. For example, when humanity imagined the act of flying, they invented an airplane, and when they wanted to reach for the stars, they invented a spacecraft.

Because graphic design is a member of the visual arts it shares the same formal elements. These elements were categorised by the Bauhaus School in Germany in the 1920s. These formal elements can be defined as (Botha-Ebbers 1994:71; Jackson, 2008:64; Pantaleo, 2012; Peterson, 2008:27-28; Pettersson, 2010):

- Point and line;
- Shape;
- Texture;
- Space;
- Tone and colour.

Graphic design can be seen as the arrangement of some or all of these elements in order to communicate a message successfully through identification, instruction and/or presentation. These elements can also be used in design rhetoric in order to construct and present persuasive design which forms part of communication that will be discussed in detail later.

Jackson (2008:64) explains that a distinct characteristic of graphic design, when compared to other visual arts, is that of context. Graphic design requires an audience and, to effectively communicate with that audience, a message must be applied within a suitable context. He makes it clear that context can manifest itself through how, where and when graphic design is communicated to its intended audience.

Therefore it can be concluded that the elements of graphic design will enhance the communication of a message within a certain context.

2.6.2.2 Graphic design as communication

It seems that communicating a message is inherent to graphic design. This is because a graphic designer is first and foremost a communicator. According to Table 2.1, communication design and graphic design can be seen as one discipline, because graphic design must communicate a message in order to be called graphic design.

To strengthen this point, Kalman describes graphic design as a “means of communication” and Hollis implies that it is a kind of “visual communication” (Barnard, 2005:18).

Schaefer and Warren (2004), Dong-Sik (2006), Giraldo (2004) and Bühling, Brihi, Wißner and André (2011) agree with Barnard (2005:18-19), who explains this communication through graphic design as a medium or vehicle by which a message is transported. This concept of communication is the

core of the general understanding of graphic design. Thus, in order to get more clarity on graphic design as a discipline, one cannot ignore human communication.

Stone, Singletary and Richmond (1999:48) are of the opinion that communication has many different meanings to different people. They define human communication as “a two-way process by which one person stimulates meaning in the mind(s) of another person(s) through verbal and/or non-verbal messages”.

This definition acknowledges the ongoing, dynamic process of human communication, as well as the fact that human communication stimulates meaning through verbal and/or nonverbal messages. This definition also acknowledges that different meanings can be stimulated in the minds of the receivers. Thus, meaning is crucial – it is not simply the exchange of a message (Búi, 2005; Cuacos Encarnación, 2008; Stone, Singletary & Richmond, 1999:48).

In short, a message will only be functional when it is clear. Graphic design, as discussed earlier, must also be functional in order to be successful. This shows that a clear understanding of human communication is vital to the graphic designer.

There are three types of communication of which the graphic designer must be aware (Darwish, 2003:32-33; Stone, 2010; Stone, Singletary & Richmond, 1999:48-49):

- Expressive communication
This type of communication involves a message that demonstrates a person’s emotional state, feelings about something or someone, or well-being at any given time.

- Accidental communication
This type of communication involves a message that unintentionally encourages some meaning in the minds of people, sometimes a meaning that the sender does not want them to have.
- Rhetorical communication
This type of communication is intentional, purposeful and goal directed. It encourages a certain meaning in the mind of a person, persuading or influencing them to do something.

Bennett (2006:52) and Gonzales (2010) agree with Buchanan (Swanson, 1998:19) that rhetorical communication is the closest available model for graphic design, because it is the practice of persuasion.

Rhetoric, as a field of study can further be described as the practice of verbal persuasion as well as the formal study of persuasive verbal communication. Swanson (1994:60) indicates that design may be seen as the visual counterpart to rhetoric due to Buchanan's argument. In his declaration of design he states "designers have directly influenced the actions of individuals and communities, changed attitudes and values, and shaped society in surprisingly fundamental ways" (Buchanan, 1985:6)

There are three ways in which designers can shape society, specifically their behavioural change, according to Friedman (2012:147). One way is by enabling desirable behaviour by making the behaviour easier for the user than the alternative behaviours. The second way is by motivating users to modify or change their behaviour through things like education, incentives, attitude changes, etc. The last way is by pushing users towards the desirable behaviour by making alternative behaviours impossible, difficult or extremely expensive.

Thus, design rhetoric is extremely important, especially if one focuses on what design can be. Frascara and Noël (2012:40) "propose a design that,

responding to real needs of society, could generate visual materials that meet the needs and abilities of their users”. Society needs, for example, forms that are effective and user-friendly in all areas of life, signage that people in general and seniors in particular can understand and follow, teaching aids that promote learning, transparent and easy to navigate websites as well as health education for the general population. According to them this is the kind of design society needs. “This is a design that fosters equality of access to the benefits, services and opportunities that society can offer. It is ethical design, one that recognizes the different profiles of users, accepts those differences and responds to them. To perform this function design has to be user-centered, evidence-based and results-oriented” (Frascara and Noël, 2012:40).

User-centred design is design built around the user that is designed in consultation with and for the user. This design does not seek originality and can therefore not be the objective of good design work. Evidence-based design work starts with the available knowledge on human cognition and behaviour. Thus, this design is not about appearance, it is about people. Result-orientated design is used to change something, but one cannot design what one thinks is needed assuming that it will work. Rather, the designer must wait in order to evaluate the results (Frascara & Noël, 2012:40-41).

Frascara & Noël (2012:41) are of the opinion that the above-mentioned design approach is important and the promotion thereof will have to start with the development of appropriate conceptual and practical tools which can be used to educate students so that human needs and wishes may be addressed. They proposed a multidisciplinary design education in which students must evaluate society’s needs and priorities in order to apply their design skills in the important fields, “such as health, education, peace, security, eating habits, financial management and environmental preservation”.

From this it is clear that rhetorical communication would be the most important type of communication for a graphic designer, but the other two types cannot be neglected. For example, a graphic designer must be careful not to unintentionally send the wrong message, as explained in accidental communication. Accidental communication can also occur because of a lack of knowledge regarding the receiver. For this reason a thorough understanding of the culture of the receiver is very important.

Buchanan (1998:8) studied the alternative approaches to design that assisted in the development of the design discipline and professions in the twentieth century. According to him these energies continue to expand the understanding and influence of contemporary design. There are many approaches, but due to subtle differences he divided them into four areas, based on a rhetorical commonplace that has been fundamental in design practice and speculation. These areas are spiritual and cultural ideals grounded in being or transcendental ideas, character and discipline grounded in the environment of action, material conditions and science grounded in physical nature, as well as power and control grounded in the agency behind action.

This indicates that the fundamentals, technical knowledge and physical skills, as well as imagination and creativity, will not be enough to be a successful graphic designer. A comprehensive knowledge of communication skills within the above-mentioned areas is also important in order to be successful as a graphic designer and a communicator.

Thus, the ultimate function of graphic design must be to communicate a message through a product of graphic design. The next section will describe the functions of graphic design in more detail.

2.6.2.3 Functions of graphic design

Harland (2006) agrees with Newark (2002:6) that graphic design performs, besides communication in general, also other vital functions:

- It informs.
- It sorts and differentiates, for example, it distinguishes one company, organisation or nation from another.
- It acts on people's emotions and helps to shape how people feel about the world around them.

These functions clearly indicate what a big influence graphic design has on the world. For this reason, Newark (2002:6) asks what would happen if graphic design were to be banned or simply disappeared overnight? According to him there would be no written word, no newspapers, no magazines, no internet, no science to speak of, books for the wealthy only, and only a handful of universities. Everything would have to be slowly and carefully written by hand. Most information would have to be carried over by the spoken word.

However, these are not the only media and functions of graphic design. Buchanan (1998:11-12) is of the opinion that the creation of pleasure in design is the designer's responsibility and it must be integrated with three other responsibilities, namely the good, the useful and the just. The good in design confirms the appropriate place of human beings in the spiritual and natural order of the world. The usefulness of design supports human beings in accomplishing their interactions. The just in design supports the relations between human beings, including the distribution of goods. The pleasure in design satisfies the physical and psychological needs of human beings.

It is evident from this discussion that in order for design to be good, useful and just, conceptions, principles and values will be in a constant challenge to create this kind of design, including graphic design. Thus, the ultimate purpose or function of [graphic] design in society is to consider products that express and reconcile human values and principles concerning what are good, useful, just and pleasurable (Buchanan, 1998:11). This indicates the importance of graphic design to the modern world and its multitude of uses.

2.6.2.4 The use of graphic design

Newark's (2002) discussion of the application of graphic design was referred to in previous paragraphs, but one must bear in mind that the use of graphic design spans many disciplines and utilises various mediums. I have therefore arranged some of the most prevalent applications into different categories, following no specific order, in Table 2.2. These include the following, amongst others:

Books:	Book cover design (Eskilson, 2007:236).
	Book jacket design (Eskilson, 2007:240).
	Book layout (Eskilson, 2007:303).
	Journal cover design (Eskilson, 2007:246).
	Journal design (Eskilson, 2007:308).
	Booklet cover design (Meggs & Purvis, 2006:450-451).
	Booklet layout (Meggs & Purvis, 2006:504).
	Comic book design (Eskilson, 2007:386).
	Manual cover design (Eskilson, 2007:331).
	Telephone book design (Eskilson, 2007:364).
Magazines:	Magazine cover design (Eskilson, 2007:259).
	Magazine layout (Eskilson, 2007:256).
Newspapers:	Newspaper layout (Eskilson, 2007:313).
	Newspaper advertisements (Meggs & Purvis, 2006:435).
	Bulletin cover design (Meggs & Purvis, 2006:420).
Advertising:	Advertising layout design (Eskilson, 2007:308).
	Billboard design (Eskilson, 2007:389).
	Web-based banner advertisement (Eskilson, 2007:396).
	Bus shelter advertisement (Sappi ideas that matter, 2005:52).

	Toilet door advertisement (Sappi ideas that matter, 2005:36).
	Exterior/interior bus advertisement (Sappi ideas that matter, 2007:91).
	Bench back design (Sappi ideas that matter, 2007:117).
Direct mail:	Direct mail folder design (Meggs & Purvis, 2006:469).
	Promotional mailer (Meggs & Purvis, 2006:479).
Catalogues:	Catalogue cover design (Eskilson, 2007:283).
	Catalogue design (Eskilson, 2007:283).
Corporate identities:	Corporate identity (Pipes, 2009:24).
	Logo design (Eskilson, 2007:329).
	Trademarks (Meggs & Purvis, 2006:457).
	Pictographs (Meggs & Purvis, 2006:418-419).
	Business card design (Ambrose & Harris, 2008:159).
	Letterhead design (Eskilson, 2007:249).
	Compliment slip design (A decade of South African design excellence, s.a:15).
	Envelope design (Ambrose & Harris, 2008:16).
	Folder design (A decade of South African design excellence, s.a:35).
	Fax sheet design (A decade of South African design excellence, s.a:31).
	Memo design (A decade of South African design excellence, s.a:31).
	Invoice design (A decade of South African design excellence, s.a:36).
	Receipt design (A decade of South African design excellence, s.a:36).
	Order form design (Meggs & Purvis, 2006:474-475).
Cards:	Invitation design (Meggs & Purvis, 2006:474-475).
	Membership card design (Ambrose & Harris, 2008:136).
	Christmas card design (A decade of South African design excellence, s.a:82).
	Postcard design (Sappi ideas that matter, 2005:15).
	Greeting card design (Sappi ideas that matter, 2005:55).
	Thank you card design (Sappi ideas that matter, 2007:77).
Digital design:	Website design (Eskilson, 2007:392).
	Website animation (Eskilson, 2007:404).
	Digital comic graphics (Pipes, 2009:106).
	Computer icon design (Meggs & Purvis, 2006:489).
	Digital illustration (Meggs & Purvis, 2006:502-503).
	CD-ROM screen design (Meggs & Purvis, 2006:504).
	Film title sequence design (Eskilson, 2007:398).
	Video graphics (Eskilson, 2007:402-403).
Entertainment:	Album/record cover design (Eskilson, 2007:342).
	CD cover design (Pipes, 2009:109).

	DVD cover design (Pipes, 2009:109).
Brochures:	Brochure design (Eskilson, 2007:377).
	Brochure cover design (Meggs & Purvis, 2006:470-471).
Promotional items:	Promotional brochure design (Pipes, 2009:171).
	Promotional report design (Pipes, 2009:171).
	Promotional booklet design (Meggs & Purvis, 2006:482-483).
	Calendar design (Meggs & Purvis, 2006:518).
	Point of sale banner design (A decade of South African design excellence, s.a:142).
	Sticker design (Sappi ideas that matter, 2005:11).
	Shelf talkers (Sappi ideas that matter, 2005:11).
	T-shirt design (Pipes, 2009:245).
	Tag design (Sappi ideas that matter, 2005:82).
	Gift certificate design (Sappi ideas that matter, 2005:97).
	Transferable tattoo design (Sappi ideas that matter, 2007:33).
	Coupon design (Sappi ideas that matter, 2007:13).
	Newsletter design (Sappi ideas that matter, 2007:97).
	Pamphlet design (Eskilson, 2007:382).
	Flyer design (A decade of South African design excellence, s.a:103).
	Event programme design (Ambrose & Harris, 2008:135).
Packaging:	Packaging design (Pipes, 2009:147).
	Label design (Pipes, 2009:211).
Signage:	Sign board design (Sappi ideas that matter, 2005:15).
	Info screen design (Sappi ideas that matter, 2005:43).
Other:	Poster design (Eskilson, 2007:192).
	Shopping bag design (A decade of South African design excellence, s.a:189).
	Vehicle wrap design (A decade of South African design excellence, s.a:33).
	Annual report design (A decade of South African design excellence, s.a:124).
	Menu design (A decade of South African design excellence, s.a:155).
	Door hanger design (Sappi ideas that matter, 2007:59).
	Bus ticket design (Sappi ideas that matter, 2005:52).
	Wrapping paper design (Sappi ideas that matter, 2007:59).
	Map design (Pipes, 2009:197).
	Postage stamp design (Eskilson, 2007:364).
	Money design (Eskilson, 2007:364).
	Typography (Eskilson, 2007:188).
	Illustration (Meggs & Purvis, 2006:428-429).

Table 2.2: Graphic design categories.

From this it is clear that graphic design has many different functions, applications, elements and communication processes and purposes. Communication from the graphic designer transmitting a message to society at large is the relationship that is usually primary within the context of graphic design. But, in the graphic design process, communication does not start with the receiver of the message; on the contrary it starts with the client. There must be clear communication between the graphic designer and the client in order to create a successful end product that can communicate clearly.

2.6.2.5 The relationship between the graphic designer and the client

Kovalerchuk (2004), Khadilkar and Stauffer (1996) and Frascara (1997:11) agree with the fact that graphic design is a medium for communication, and thus it is a decision-making process.

I am of the opinion that this decision-making process normally starts with a design problem. Usually the client proposes the design problem to the graphic designer, and then the decision-making process takes place between these two parties. In order for this to be successful one needs clear communication.

Frascara (1997:11) informs graphic designers to always strive to base their decisions, where possible, on reliable information from the client. But unfortunately there almost always is a leap to be taken from a series of recommendations to the creation of a design outline, a process that involves too many details for all of them to be controllable.

Frascara (1997:11) provides the following recommendations:

- The problem as well as the action must be expressed verbally. This is not only for the graphic designer's understanding of the problem, but

also for the client's understanding of the graphic designer's perceptions and intentions.

- The graphic designer must create a relationship of trust with the client. Speaking the language of the client, which is usually verbal and rational, not visual and subjective, can do this.

Therefore one can conclude that a good relationship between the graphic designer and the client is a vital element in the design process in order to solve the design problem. The graphic designer and client must also be able to communicate clearly and freely, even beyond the boundaries of culture and language in a global world.

2.6.2.6 Globalisation and graphic design

Global, as a term, relates to the whole world, according to the Concise Oxford English Dictionary (Soanes & Stevenson, 2008:605). For the purpose of this study the word globalisation, "the process by which businesses or other organisations start operating on a global scale" (Soanes & Stevenson, 2008:605), will be used to describe these effects.

Globalisation raises a variety of problems for graphic design as a communication medium. Graphic design can be explained in cultural terms as the visual construction and reproduction of beliefs, values and ideas. The construction and reproduction of these beliefs builds and duplicates cultural identities. Barnard (2005:153) poses three problems in connection with this:

- Are there global values, beliefs and ideas, or are the values presented only those held by the dominant cultural groups?
- What is the possibility of global values? Can there be global values and, if so, will they always be those of the dominant cultural group?

- What is the role of the graphic designer in global communication? Are graphic designers reproducing or challenging the positions of certain dominant cultural groups?

In short, graphic designers should know their audience in order to communicate successfully. This is easy when their audience consists of a specific culture, but it becomes extremely complicated to communicate globally to a variety of cultures.

Miller states that graphic designers are faced with “conflicting imperatives” to contribute towards the establishment of a global village, but not to contribute to the process in which cultural groups dominate or integrate other cultural groups (Barnard, 2005:153; Debiase, 2008; Matthiessen, 2011; Reyburn, 2008:2). For example, colours have different meanings in different cultures. Red means good luck in China and Singapore, but it does not have the same meaning in the United States and Europe.

Therefore it is vital for graphic designers living in a global world and in a post-modern era to do sufficient research on their target audience in order to communicate an effective message. This, no doubt, is the primary demand on the graphic designer as a professional but also inextricably associated with the graphic designer as a person.

2.6.2.7 The demands placed on a graphic designer as a person

The personal demand on the graphic designer by the need to convey such a message is aptly expressed by McCoy (Barnard, 2005:19) when he says that a graphic designer must be the “neutral transmitter of the client’s message” (Bomeny, 2009). This statement shows that a graphic designer cannot let their personal feelings and values get in the way of delivering a clear message. This, however, can be a very difficult demand placed on a graphic designer as a person, because of their creativeness.

Personal feelings and values, according to Newark (2002:10), can be the seed of the most fundamental tension that exists within the graphic designer. This tension can be between personal values, for example, and the message that needs to be conveyed. Tractinsky (2004:4), Overmyer (2000) and Marcus, Cowan and Smith (1989) agree with Newark (2002:10), who continues to describe graphic design as an essentially functional activity, but at the same time arguing that it must also be creatively expressive, in other words, functionality versus aesthetics. These two ideas are generally set against one another, because what is functional is not always aesthetic and vice versa. This tension exists both within the field of graphic design and within each individual graphic designer. I am of the opinion that this demand will be placed on all graphic designers and that it may be the most difficult one of them all.

The globalised world also has certain requirements for the graphic designer, as they have a responsibility to create the character of the society in which we live. Chmela-Jones (2011:62), Davies Cooper and Cooper (1984) and Noble and Bestley (2001:2) agree with Frascara (1997:12) that graphic designers have a professional responsibility and that they must be able to communicate to different cultures, beliefs, values and ideas. In other words, the graphic designer must know their audience. There must also be a good relationship of trust between the graphic designer and the client. Friedman (2012:151) once said “[t]o serve human beings, outstanding professional designers must master an art of human engagement based on ethics and on care.”

2.6.2.8 Graphic design ethics

It is an ethical imperative for the graphic designer to take care of the graphic design medium through which the message will be transmitted. Graphic design can be seen as a transparent medium, as discussed by Barnard

(2005:19) as well as Siegel and Stolterman (2009), in the sense that it adds nothing and takes nothing away from the message. In other words, the message is clear and there is no noise hindering the message from being delivered. A transparent medium can also be seen as one that distorts nothing that passes through it, and graphic design is frequently presented as such a medium. Graphic design has no message of its own and does not compose a message by itself.

Thus, the graphic designer must ensure a clear and reliable message, despite the fact that they still have to attract the attention of the target audience. In other words, the graphic designer must be able to design in such a way that the target audience will be reached with a clear and reliable message. This is not always easy, as explained in the previous paragraph, where Newark (2002:10) describes graphic design as a functional activity, but also an activity that must be creative, thus functionality versus aesthetics. These two ideas can be set against one another, because what is functional is not always aesthetic and vice versa.

The father of the term “graphic design”, William Addison Dwiggins, wrote the following statement in 1922 (Newark, 2002:10): “In the matter of layout forget art at the start and use horse-sense. The printing-designer’s whole duty is to make a clear presentation of the message – to get the important statements forward and the minor parts placed so that they will not be overlooked. This calls for an exercise of common sense and a faculty of analysis rather than for art.”

This indicates that, in order for graphic design to be ethical, it needs to be a medium that tells the “whole story”. This ability to offer a clear presentation can be seen as one of the fundamental human qualities that should be present in the professional graphic designer in order for them to be considered trustworthy in helping support the moral character of society.

2.6.2.9 The professional responsibility of the graphic designer

There can be no doubt by now that the graphic designer is burdened with extraordinary professional responsibility towards the audience. According to Frascara (1997:12), sophisticated observation and cognition research tests have been developed in order to evaluate and design highway signs, control panels, graphic symbols, teaching aids, forms and computer screen displays. This knowledge can be used to support the design process, especially for designs that need to convey warning messages of extreme danger, for example. But unfortunately, for unknown reasons, this knowledge is not used to design most of these communication products. This is shocking, particularly in dangerous cases such as labels for chemical and pharmaceutical products, signage for industrial plants, emergency instructions and securities design. The concern of Frascara (1997:12) and Berman (2009:3) is that graphic designers ignore this area of responsibility.

For this reason, graphic design education must be more than just teaching students the fundamentals, exploring techniques and learning about new technology. It should also be about their personal development from child to young adult, and their professional development from student to professional graphic designer. Relationships and communication are very important aspects in order for a graphic designer to be a responsible professional.

In a globalised world, the above-mentioned demands and professional responsibilities call for an intelligent, imaginative and creative person with exceptional communication skills. These characteristics are vital if one wants to be a graphic designer.

2.6.2.10 Who is a graphic designer?

Besides these vital characteristics - having intelligence, imagination and creativity - a graphic designer is someone who wants to communicate by

simplifying and clarifying messages, as well as by creating something different and aesthetically pleasing. The influence and power of fresh visual form must be deeply rooted in all graphic designers. A graphic designer can be seen as someone who is always making sense of material, and mediating it through the forms and codes of a visual language (Frascara, 1988; Newark, 2002:14).

In short, a person who wants to become a graphic designer must first and foremost be a communicator. The message that needs to be communicated is usually not their own message, but that of a client. This message must be clear and functional, but also aesthetically pleasing. This can place exceptional demands on the graphic designer.

It is clear from the discussion up to this point that, in order to be a successful professional graphic designer in a post-modern era, considering appropriate theoretical models for graphic design with its implications on graphic design education is an imperative.

2.6.2.11 Implications for educating the graphic designer

Theoretical models from six authors, which present comprehensive and integrated ideas and perspectives on graphic design in the contemporary world as well as their implications on graphic design education, will be presented in the following paragraphs.

The first author, Davis (2012:113) states that there is adequate evidence that the context for design, and this includes graphic design practice in the twenty-first century, is significantly different from that of the previous century. According to her this is due to the fact that problems are increasingly complex and [graphic] designers must not simplify things, they must rather manage them. Thus, [graphic] design is no longer at the cosmetic end of the decision-making process but rather a necessary partner with a

variety of disciplinary experts. This involvement shifted the [graphic] designer's work from crafting the physical artifacts to the development of tools and systems through which others can create their own experiences.

These changes will inevitably alter the way in which young [graphic] designers enter the practice. Davis (2012:114) explains it as follows: "In the twentieth century, design graduates began work in the technical service of more experienced designers. If they performed well, they advanced to form-making. And if they stayed in the field long enough, some earned the right to advise clients on overall communication or product development strategy". However, according to him there is currently too much to know about the management of technology to think of it as the steppingstone to the other aspects of design practice. "Further, the democratization of the means of production and distribution through software and the Internet diminish the role of the designer as the gatekeeper to getting things made. And as design lost some of its traditional responsibilities in the last decades, it expanded its involvement in high-level business strategy, especially in the areas of innovation management, branding and service design" (Davis, 2012:114) .

It is obvious from this discussion that these changes in the context for [graphic] design practice will influence contemporary [graphic] design education. According to Davis (2012:114) [graphic] design education currently consists of projects that are isolated from the rich contexts in which design problems reside. Their studies include products (books, packaging, etc.) tools (for example the software) and segments of the practice (like web design or advertising). The problem is that many of these products, tools and practices may change before the student graduates.

Therefore, Davis (2012:120) believes that [graphic] design education must challenge the contemporary context for [graphic] design in order to find what truly separates leadership and innovation from business as usual. Students, educators and [graphic] designers must anticipate new places where [graphic] design can have an influence and that must be addressed through research and collaboration with other disciplines.

The second author, Buchanan (1998:13), states that the natural ability of [graphic] designers in a contemporary world is not enough. According to him the intellectual and moral character of [graphic] designers is formed when natural ability is extended and supported by the arts and science through disciplines of thought, action and production.

These challenges call for renewed thinking within the graphic design profession. Fortunately [graphic] design attracts increasing attention in the contemporary world, according to Buchanan (1998:18), and therefore “there is hope that design thinking, applied in many new areas, can serve as an alternative to the old forms of technocracy based on scientific specialization, where experts in narrow areas of learning once believed that they could improve and enrich life merely by applying technical knowledge to solve the problems of everyday life.” This is positive since [graphic] designers seek to include all who will be affected by a new product in the process of discussion and decision-making.

However, according to Buchanan’s (1998:20) research, contemporary [graphic] designers should no longer design for a universal audience, national groups, market segments or even the consumer. He is of the opinion that [graphic] designers must design for the individual placed in their immediate context in order for products to be personal pathways within an otherwise confusing society. He admits that this is a difficult challenge, but thinks there is hope due to the improvements in [graphic] design education. These improvements might make [graphic] designers more sensitive to the individual as well as increase their awareness towards the diverse kinds of knowledge within design.

The next two authors in this discussion, Frascara and Noël (2012:42), state that design has to be user-centred, evidence-based and results-oriented – all intertwined. User-centred design is where the [graphic] design process includes the user. This approach is not about the visual quality, because

visual quality if not in context with a purpose, a situation and a public is not much use (Frascara & Noël, 2012:42).

Evidence-based design is where the knowledge of perception and cognition is used within [graphic] design. This approach can assist the [graphic] designer in decisions concerning many variable possibilities and it can provide strong arguments to defend solutions (Frascara and Noël, 2012:44).

Results-orientated design is used to change something. [Graphic] design has an impact on people that may affect their knowledge, attitudes, feelings and behaviour. For this reason it is important to measure the results in order to ensure that [graphic] design has a place in society (Frascara and Noël, 2012:45).

The implications of this model of graphic design education can be described in the following quote: “Teaching involves engaging students with experiences that enable them to learn. Learning involves the acquisition of information, but also the development of learning skills. The information provided must be up-to-date, rich, accurate and relevant, and cognizant of the prior knowledge of the student” (Frascara & Noël, 2012:50). They also state that these skills must be relevant to long-term educational objectives. “Transmission is connected to teaching and discovery to learning. Both are fundamental in the educational process. Students should be taught, but they should also be taught how to learn on their own, from observing reality, from consulting the literature and from others” (Frascara & Noël, 2012:50).

The last two authors in this discussion argue that graphic design education must be reconsidered due to two external developments. Van der Waarde and Vroombout (2012:24) describe the first external development as the change in the professional practice itself due to digital technology, tighter economical control and globalization. The second external development is the changes in education. These developments are the reason for insecurities within graphic design education. This includes the course contents and

structure, the assessment criteria, research, theory and the teaching methods (Van der Waarde and Vroombout, 2012:24-25).

Van der Waarde and Vroombout (2012:29-35) note nine aspects that are necessary to design. These are considering visual configurations, planning and management, presentation and argumentation, evaluation and testing, modification for production, considering a situation, considering the problem, considering a perspective and lastly personal development. These aspects could provide a methodical basis for graphic design education by bringing students in contact with fundamental issues of the profession (course contents and structure), by assessing all the aspects separately (assessment criteria), by conducting practical, practice-based, and academic research (research), through teaching theories that are relevant for practitioners (theory) and by relating the teaching methods with the educational aims of the different aspects. The preceding paragraphs direct us to the implications for educating the graphic designer.

According to Sauthoff (2006) and McComb (2000:13), graphic design education must include culture, history, users, community and technology. The purpose is to change education from a passive process to a process in which learners collect lifelong skills as well as the ability to study on their own. This education must provide learners with an understanding of the unique relationships in which graphic designers are positioned towards a culture as a whole. This type of education must also encourage graphic designers to question their position in society and to be enlightened decision makers in order to create the character of society.

Graphic design educators also play a very important role in rediscovering creativity, especially in cases where it has been lost. Meggs (1995:84) and Finch (2001) believe that learners must be exposed to the unknown and that they have to manage it by themselves. This challenge will contribute to the rediscovery of their creativity and will enable them to be enlightened decision makers in a globalised world.

It becomes clear that graphic design education must be an active process between educator and learner in order for the learner to develop lifelong skills, creativity and decision-making skills. Thus, graphic design education must undoubtedly be very specific and unique.

2.7 Graphic design education

Graphic design education is one of the sub-divisions of general arts education. For this reason I would like to provide a basic clarification of arts education in general as a background to graphic design education.

2.7.1 Arts education as foundation of graphic design education

Stephen Mark Dobbs, educationist in creative art at the San Francisco State University, insists that education in art must include four basic components: art production, where learners create their own art; art criticism, where learners form their own perceptions and evaluate art from different viewpoints; art history and culture, where they look at the different contributions of artists to culture and the community; and ethics, where learners learn how to evaluate the quality of art and the visual world around them (Black, 1996:5).

In order to include the above-mentioned components, art educators, but also artists, must be involved in the development of art education. Art education must not only be about qualification requirements or new contributions to the arts. The foundation of art education must include involvement in the reformation of schools and community care (McWhinnie, 1972; O'Fallon, 1995:7).

Apart from the involvement of art educators and artists in art education, Assey (1999:3), Rooney (2004:9) and Potter (1999:1) are also of the opinion

that learners, specifically in the USA, do not have enough opportunity to experience the arts. The arts can be experienced in many different ways, for example by visiting art museums/galleries, going to the theatre or by creating your own art. Further, Potter (1999:1) believes that art educators should come together to discuss art programmes and to decide how to promote art education. These programmes should also be adapted so that they can be integrated into learners' previous art experiences, because not all students are on the same level. Some learners are introduced to the arts at a very early age, and others only later in life.

The preceding paragraphs illustrate the importance of art production, art criticism, art history, art culture and ethics, as well as the involvement of artists in education. Learners also need to experience the arts. With arts education as the foundation of graphic design education, the question that comes to mind is what is the relationship between arts education and graphic design education?

2.7.2 The relationship between arts education and graphic design education

According to Swanson (1998:18), graphic design is an integrative field that bridges several subjects dealing with communication, expression, interaction and cognition. Expression, interaction and cognition are also important aspects in arts education.

Another connection between arts education and graphic design education is the importance of visual syntax and composition, since both disciplines are visual practices (Tregay, 2000:7; Wild, 1998:44, 46). This shows that certain aspects of arts education and graphic design education overlap, and therefore some educational principles will also be similar.

As with artists, graphic designers must also be involved in the development of graphic design education. To this end, the South African Communication

Design Council (THINK) was established to serve the needs of designers in South Africa, but also to promote dialogue between the graphic design industry and graphic design education.

2.7.3 Consolidation of graphic design education

Friedman (2012:149) argues that the difference between contemporary design education and that of the past century is that designers must now strategize the tools they shape through the post-industrial processes. He explains that design in the past century relied on craft traditions, which functioned in slow patterns based on common sense, trial-and-error and experience. Today, however, professional design practice involves advanced multi-disciplinary knowledge that promotes interdisciplinary collaboration as well as fundamental changes in design education. This is not just a higher level of education and practice; it is a different form of professional practice emerging from the demands of the information society and the knowledge economy. This is not only true for design education, but also for graphic design education.

Thus, graphic design is undergoing great transformation, as new technologies continuously challenge the way things are produced. Today's graphic designers must be much more versatile than in previous years. They must be able to design websites, arrange exhibitions, contribute to interactive software design and more. In other words, the boundaries between graphic design and other media are beginning to blur and many crossovers are occurring (Hembree, 2008:82; Margolin, 1998:163).

These changes require modifications in the traditional foundation of graphic design education. Margolin (1998:166) proposes four core topics for design studies in general. These are design practice, which includes conception, planning and the making of a product; design products, where the emphasis will be on the identity and interpretation of the product and its role in

society; design discourse, where the main concern will be the different arguments about what design is and might be, as in the literature of design; and lastly, the meta-discourse of design studies, where the focus will be on reflection on the field itself and the location of the field's self-awareness. These four topics will strengthen graphic design education if used as a framework for a curriculum in the post-modern era.

2.7.4 Educating the post-modern student

The post-modern student grows up in the new millennium, where sophisticated communication technology is the order of the day (Askeland & Payne, 2006; Slabbert, De Kock & Hattingh, 2009:23;). For this reason it is necessary to modify the traditional foundations of graphic design education. This new millennium can be characterised by certain changes, for example there were changes in the physical world, the world of work and in the post-modern student.

2.7.4.1 The physical world has changed

According to Slabbert, De Kock and Hattingh (2009:3-6), the world as we know it changed greatly during the previous century. They name a few of these changes:

- Violence, humiliation, bullying and sexual abuse in schools;
- poverty, HIV/Aids and teenage pregnancy;
- the digital generation;
- people losing their sense of being; and
- changes in the physical environment.

All of these changes have an influence on education, because education does not exist or function in a vacuum (Green & Hannon, 2007; Slabbert, De Kock

& Hattingh, 2009:10). In the same vein, the world of work in the post-modern era has change dramatically.

2.7.4.2 The world of work has changed

Applebaum (1992) agrees with Hughes (1997:7), who describes the world of work as one of the most fundamental, enduring human activities. It gives meaning to people's lives in the sense that it holds a powerful identifying quality. The nature and structure of the world of work are also very dominant features in society, and any changes impose tension on society.

As stated earlier, graphic design is undergoing great transformation because of new technologies, and it is understandable that these technologies will change the world of work. Austin (2002:9) agrees with Byrne and Witte (1994:115,116) that computers have changed the work of a graphic designer tremendously. The computer allows the graphic designer to view all the elements needing to be organised at once. The graphic designer can manoeuvre and view images even before any design decisions are made. All the elements can be sized, styled and positioned in a variety of ways. The graphic designer can experiment freely with the relationships of all the elements to one another.

Computers also allow graphic designers to be much more versatile in the world of work. These technologies and changes are responsible for the boundaries between graphic design and other media beginning to blur and that many crossovers are occurring, as discussed earlier. Slabbert, De Kock and Hattingh (2009:18) point out that transformation in the world of work leads to a dramatic change in the education of the post-modern student.

2.7.4.3 The post-modern student has changed

Apart from the physical changes and the changes in the world of work, there have also been tremendous changes in today's children (Slabbert, De Kock &

Hattingh, 2009:20). According to Slabbert, De Kock and Hattingh (2009), as well as Kress (2011), our challenge as educators is to understand these differences in order to educate the post-modern student.

Educators must also bear in mind that the new generation grew up with sophisticated communication technology from which they can get any information, at any time, and this has caused the past and science to lose their trustworthiness (Slabbert, De Kock & Hattingh, 2009:23). Thus, educators must keep up with these changes in order to facilitate learning successfully. For example, most of the first-year students that come into our graphic design course are technologically advanced. This means that some of the software training that was a necessity in the past is overrated at present. Graphic design education therefore has to be about more than just teaching fundamentals, techniques and technology. Students must also develop personally and professionally from student to graphic designer.

The aim of this study is to make teaching interventions energetic, dynamic and more applicable to the new generation, not only to prepare them for the graphic design profession, but also for them to acquire fundamental qualities in order to participate meaningfully in the community of graphic design and to build the moral and ethical character of society.

2.8 Requirements for graphic design education

The preceding paragraphs indicate some requirements for graphic design education. Besides teaching fundamentals, technical abilities and physical skills, intelligence, imagination and creativity are also requirements for graphic design education.

2.8.1 Intelligence

Bierut (1994:215) calls graphic designers lucky, because they are structurers of the world's communications. Graphic designers can partake in as many

fields as they have clients. For example, in a single day a graphic designer can discuss real estate issues with one client, cancer cures with another and forklift trucks with a third.

Fernández (2006) agrees with Bierut (1994:215) that the people who invented graphic design were largely self-taught. They did not have formal training because it did not exist. Yet they were able to succeed because of their curiosity about not only art and design, but also about fields such as culture, science, politics and history.

To be able to communicate within a multitude of life domains and on a multitude of different levels, considering everything virtually instantaneously and simultaneously, graphic designers need a high level intelligence. For this reason, intelligence will be an important requirement in graphic design education.

2.8.2 Creativity and imagination

Creativity and imagination are inseparable when considering graphic design and subsequently its education. Graphic design is a process of creating and, in order to create, one needs to be creative. To further emphasise this point, Edward de Bono (1993:3) presents a clear and basic definition for creativity: “At the simplest level ‘creative’ means bringing into being something that was not there before.”

As an educator in graphic design one must have a clear understanding of how to develop and increase creativity.

2.8.2.1 Creativity in young children

Gardner (1982:87) explains that the key to children’s creativity lies in understanding a child’s overall pattern of development (Efland, 1964;

Torrance, 1977). During the first year or two, the child comes to know the world directly through their senses and actions. They learn about the world of physical things and, equally important, they gain primary contact with the social world. This knowledge is, at first, direct. The child's perception is limited to actual encounters with the things and people of their world. This shows that creativity starts to develop through a child's senses as well as actions.

Preschool is often described as a golden age of creativity, a time when every child glistens with imagination. As those years pass, however, it seems that children are corrupted in a way, so that most ultimately grow up to be creatively underdeveloped adults (Bresler, 1992; Coates & Coates, 2006; Gardner, 1982:86; Nelson, Martin & Baldwin, 1998; Paskevaska, 2001; Wong, 1997).

To prevent the above-mentioned phenomenon, D'Amico (1953:16) believes that a child must be able to freely express their feelings, ideas and impressions through art. The educator must initially not expect too much of the child, who must first be able to enjoy expressing themselves. Thereafter the educator can assist them to become aware of certain problems of design that appear in the work. From this state of awareness the educator can guide the child to work consciously with these values and, after extensive practise, they may master them (Dudek, 1974; Mellou, 1996).

In short, children must have the freedom to express themselves through art, without any feeling of possible failure. These feelings of potential failure will oppress the development of creativity in this developmental phase of a child's life.

Gardner (1982:89) is of the opinion that an equally significant contribution is the environment in which a child develops. During the natural creativity of the preschool years, active involvement is not necessary; simply providing children with art materials and exposing them to examples of artwork are

enough. However, at the beginning of school, with the preoccupation with rules and convention, the environment must take on a more active role. This is a time when children desire knowledge of how to do things. In the same light, educators who are willing to instruct become essential. This shows that it is important that educators create an environment in which children can develop and improve their creativity with proper instruction.

To add to this, D'Amico (1953:2) advises educators not to put too much emphasis on talented children, because this will result in the specialisation of the child before it is good for them. The aim of art in child education is to be a suitable and necessary experience for all children. When there is specialisation this aim becomes distorted.

In order to ensure creative development without oppressing it, one must understand the process of creative development. Some people speak of a U-shaped curve in creative development. The first part of this "U" denotes the apparent high level of creativity found among preschoolers; the trough of the "U" indicates the period of literalness, when the child's creative endeavours are less appealing to others; the victorious resurgence of the "U" indicates the attainment (on the part of at least some adolescents) of a new, higher level of creative achievement. It has been debated whether each end of the "U" designates the same kind of skill, or whether, instead, the kind of creativity shown by most preschoolers is of a fundamentally different order from that seen in the minority of adolescents who are creatively accomplished (Gardner, 1982:88-89; Hallam, Gupta & Lee, 2008; Rostan, 1997).

This brings me to the next question: What happens to most children's sense of creativity at adolescence?

2.8.2.2 Creativity at adolescence

Most children's sense of creativity diminishes at adolescence (Wolf & Larson, 1981). This change is probably due to a variety of circumstances but,

according to D'Amico (1953:211), the improper teaching of the child is largely responsible.

As previously indicated, educators must understand the process of creative development in order to ensure optimal creativity in children and prevent the oppressing thereof. When the creative power and interest of a teenager diminishes, most educators are faced with children who are uninspired by art and therefore also lack imagination and expression. This can discourage the educator, who, in turn, seeks help from current practices, art magazines or method books, which are designed to help the educator. The problem with this is that the ideas from these sources can be superficial and irrelevant, which will then limit the educator as well as the learners (D'Amico, 1953:4).

Therefore it is better to prevent this phenomenon than correcting it after creativity diminishes. Gardner (1982:90) suspects that there exists a "sensitive period" during the pre-adolescent years. This is why Gardner (1982:102) notes that it becomes essential to achieve proficiency by the time of adolescence, because during the teenage years youths learn to deal with the full range of alternatives in an art form, as well as the peaks of excellence achieved by certain elders and peers. If their own work falls way below this standard, they more than likely will become despondent and stop their artistic activity all together. If, however, youths have gained enough skills during the pre-adolescent years they might develop lifelong involvement with the arts.

2.8.2.3 Improving creative skills

As an educator at tertiary level, one cannot always control the development of creativity at preschool and in adolescence, but creativity is still extremely important in the education of a graphic designer. For this reason one needs to look at possible methods to improve creativity at the tertiary level.

Graphic design is a problem-solving process. Talerico (2011) and Treffinger, Selby and Isaksen (2008) concur with Capdevielle, Perkins, Cilliers, Tishman, Ka Sibisi, Goodrich, Van Heusden, Chonco and Viljoen (1992:33), who recommend that people's thinking must be broad and adventurous when needing to solve a problem. They should be on the look out for alternatives, possibilities and choices. Thus, the educator should stimulate students in such a way that they will seek alternative solutions, instead of merely choosing the obvious. This will improve creativity.

On the other hand, De Bono (1993) is of the opinion that a growing number of people believe that creative skills can be enhanced through direct effort and attention. There are two difficulties with such a statement:

- Inhibition – the fear of being wrong and the fear of making mistakes.
- Damage done by the concept of “brainstorming”. Unfortunately, brainstorming has become synonymous with planned creative effort and has blocked the progress of serious creative thinking skills.

The views of Capdevielle *et al.* (1992:11) on brainstorming are in contradiction to De Bono's views because they describe their brainstorming sessions as follows: “We make our thinking broad and adventurous, and clear and careful. We take time to think of ideas. When we have many ideas or plans we organise them.”

I am of the opinion that brainstorming can still be extremely valuable, provided that it is done in the correct way. De la Harpe (2007:34-36) agrees with Capdevielle *et al.* (1992:12), who put emphasis on two rules when brainstorming. The first rule is that one does not judge the ideas until all are given, and the second rule is that one does not choose an idea before all are suggested.

Other essential ideas about brainstorming as presented by Capdevielle *et al.* (1992:12-13):

- Take time to think when brainstorming.
- Thinking must be broad and adventurous.
- All ideas have an equal opportunity to be used. There are no wrong or right ideas.
- Use pictures to organise thinking.

To take brainstorming a little further, Hillel and Holmes (1995:3) give the following useful suggestions for brainstorming and class discussions:

- Provide a worksheet, something like a mind map, to start unlocking ideas.
- Everybody must be seated in a circle, including the educator.
- Children are held back if they have to raise their hands before they speak.
- “Discussion points” can be a helpful start to exploring ideas.
- Use each other’s names in the discussion.
- Involve quieter children and make sure everyone gets a turn.
- The educator must be a member of the group, not the one with the “right” answer.
- Always end the discussion with a review of the points covered.

Brainstorming is one of many ways to improve creative skills. Creative thinking skills will add to this.

2.8.2.4 Creative thinking skills

The creative process starts with thinking. In order to improve creative skills one must also be able to improve one's creative thinking skills.

Lipman (2003:245-246) defines creative thinking as follows:

- Originality – thinking for which there are no clear examples. Originality alone is not enough to determine the value of a course in creative thinking. Such courses in creative thinking may be extremely original, as well as unusual or ridiculous. This is one reason why a number of criteria need to be called upon, in general.
- Imagination – to imagine is to visualise a potential world, or the details of such a world, or the journey one may take to reach such a world. To have other worlds that one can inhabit – and to make them available for others to inhabit also – is not easy. What is important is that those who survey the realms of possibility must preserve their sense of fact as much as possible, just as those who explore the potential world must keep their imagination intact.
- Independence – creative thinkers are people who think for themselves and who are not bullied into thinking what the crowd thinks. Independent thinkers are prone to asking questions when others are happy to continue without further reflection. When it is an independent thinker's turn to answer, they not do so mechanically and thoughtlessly, but ponder the question thoroughly before responding.

- Experimentation – creative thinking is theory-guided rather than rule-guided thinking. The theories do not need to be fully developed. They may be emergent. Creative thinking involves constant testing, as well as looking for concrete support to make the thinking experimental.
- Expression – creative thinking is expressive of both the thinker as well as the thought.
- Surprise – the meaning of originality lies in consequences, and surprise is one of these consequences when the originality is not only a new idea but also original. Although hypothetical thinking demands understanding, creative thinking defies it and thereby creates amazement and awe.

The above section shows that in order to be creative a person needs to be original, have imagination, be independent and be able to experiment, express and surprise.

Root-Bernstein (2001:218) adds dimensional thinking to these characteristics. A good number of educators pay no attention to the teaching and exercising of dimensional thinking, which means that many people are unable to integrate information given in one set of dimensions into an image or model in another set of dimensions.

Capdevielle *et al.* (1992:67) suggest the following useful thinking tools in order to become more creative:

- Utilise time to think
- Brainstorm
- Pay attention to other people's points of view
- Look for hidden options
- Analyse the problem

- Put a plan together
- Do things step by step
- Picture words
- Think on paper

Therefore, it is essential for graphic design students to develop creative thinking skills in order to be more creative and, as discussed, creativity is an important aspect in the life of a professional graphic designer. In addition to this, the development of the visual brain is also a very important aspect in the education of a graphic designer.

2.8.2.5 The visual brain

The development of the visual brain of a graphic designer has to be a primary consideration in graphic design education. According to Edwards (1993:3) and Wenger (2011), drawing ability is to a certain extent dependent on the ability to see and to perceive. “When you see in the special way in which experienced artists see, then you can draw” (Edwards, 1993:3).

Brown and Korzenik (Root-Bernstein, 2001:44) demonstrated in their book, *Art making and education*, that teaching the visual arts has always been justified to some degree by its effectiveness for increasing visual awareness.

In *Teaching with the brain in mind*, Eric Jensen (1998:22) mentions more than thirty distinct visual areas in the brain. These include colour, movement, hue and depth. According to him, the growing toddler must receive a variety of stimulating input, including much practice in handling objects and learning their shapes, weight and movement. A variety of objects, games and responses from parents shapes the way vision develops. “Children need a flood of information, a banquet, a feast,” says neuroscientist Martha Pierson of the Baylor College of Medicine (Jensen, 1998:22). Jensen is of the opinion that this “flood” should not come from television. Television provides no time

for reflection, interaction or three-dimensional visual development. He encourages parents to talk to their babies in short sentences and point out objects that are here and now, or three-dimensional.

Ramachandran (Jensen, 1998:22), a neuroscientist and vision specialist at the University of California in San Diego, states that television is two-dimensional and that the developing brain needs depth. Another problem with television is the fact that it moves fast and talks about abstractions that are often nonexistent in the child's environment. Television also allows the eyes no time to relax, and this stress can aggravate learning difficulties. He feels strongly that television is a poor replacement for sensory-motor development time and key relationship time (Ramachandran & Hubbard, S.a.:27).

It appears that television can be harmful to the development of a child's vision, but, in contradiction to this, Gardner (1982:254) observes that television can ignite a child's imagination. In the past, children's imaginations were inspired by the events and characters they encountered, and more recently by the pictures or stories found in books. Now, however, characters and events that children see on television have mainly substituted these sources. The child's imagination devours these figures from the television and then mysteriously creates drawings or stories of their own fantasy world.

In view of the fact that television can have positive and negative influences, I am of the opinion that children must have a balanced amount of television in their development phase. There must not be too much television so as not to harm the development of vision, but specific television programmes can stimulate creativity in a very positive way.

In the book, *Creative teaching in art*, D'Amico (1953:viii) recommends that the educator establishes a wide range of visual arts in order to give richness to a child's expression, to meet their general demands and to satisfy the

broadening interests of diverse and speedily changing personality. Art must be dealt with in a new way so that it can awaken the desire or need for creative experience, and can act as an opportunity for the cultivation of an individual. With these aims in mind, to follow are some recommendations:

- Improving visual sensitivity

Educators must encourage learners to improve their visual sensitivity because it will improve their artistic skills, as described before.

Edwards (1993:3) agrees with D'Amico (1953:9) who recommends that educators should train learners to see in more detail than people normally do. This opinion is shared by Professor Cizek, a famous Viennese art teacher. D'Amico describes the professor's methods as follows: he would ask his learners to draw pictures of what they had seen on their way to school. Initially the learners were convinced that they had not seen anything worthy of a picture. After some encouragement and cross-examination they would produce a few hazily remembered pictures. The reason for the learners not remembering what they saw is because they did not know how to look for pictures. Professor Cizek then told them how to look for pictures in daily experiences. They started coming to class with one or two ideas, but after mastering how to see, they were teeming with ideas. This way of seeing can be described as seeing with the inner eye, which requires discrimination. In other words, it is being able to draw only those qualities that the artist believes are noteworthy to describe a subject, mood or idea. These qualities can be an additional line, an alteration in colour, emphasis on a portion of the picture through size or value, or an exclusion of details. Seeing with the inner eye is different from seeing with the outer eye. The inner eye sees with meaning and purpose, while the outer eye sees things only as they are. When a person looks with the inner eye they will find inspiration in the ordinary things that people do. This kind of "seeing" will improve creativity because the small

details seen with the inner eye can be just what are needed to solve the design problem.

Educators should also make learners aware of overlooking. For example, ask a learner to draw subject matter in a suitable composition. After the attempt, take them to the source and compare how much has been overlooked. This is not about the subject matter, but the arrangement of the matter in a composition. In other words, learners need to design a background, use the essential detail, highlight or exaggerate the interesting elements and subordinate the uninteresting ones (D'Amico, 1953:11).

To further improve visual sensitivity, educators can also use the unseen world as a source of inspiration, for example scenes in stories, poetry, history and geography (D'Amico, 1953:13).

- Improving visual memory

The improvement of visual memory is a further important aspect in developing the visual brain and is crucial for creativity.

Shaw and DeMers (1986) concur with D'Amico (1953:8) who recommends training of the visual memory. Taking learners out of the classroom for “looking walks” can do this. “Looking walks” are just what the name suggests: learners should observe things of interest without any drawing tools. On their return to the classroom they should try to remember what they have seen and then draw these sights. This exercise trains the construction of images in both verbal and graphic expression. As soon as the learners start to draw, they become conscious of the fact that there is much detail they had not noticed and what they had thought was an excellent idea results in a poor or boring picture. This disappointment gives the opportunity for a little invention

in order to make the picture more appealing. Here are some ideas on how such a drawing can be fixed:

- One can use humour.
- One can use sorrow.
- One can enhance the human element in the subject matter.
- Or one can put emphasis on design, colour or composition.

Using these aspects will develop the learner's power to see, improve their memory and boost the creative subject matter of their work by establishing invention and originality.

Capdevielle *et al.* (1992:41) recommend using pictures and stories to open up new ways of thinking and to assist with memory (Fry, 1985; Rui, 2011). According to these authors, people can improve their memory and have fun at the same time by being adventurous in their thinking.

2.8.2.6 Teaching that hinders creativity

Even within an education that should promote creativity, that very purpose may be disabled. D'Amico (1953:15) has a problem with art education in the United States. According to him, children are taught specific rules of art and how to solve problems with these rules. Educators spend a great amount of time, for example, illustrating colour harmonies, the rules of balance, rhythm or unity. The result of these teaching methods is stereotyped work with no significance as art or child expression. These rules are only a formula without any enthusiasm, emotion or imagination. Children gain little or nothing from these rules, because sensitiveness to design cannot be acquired by memorising and rationalising a few laws. Consequently, rules can be a great obstruction to creativity.

Humans are social beings and their brains develop in a social environment. Educators using the above-mentioned one-sided lecturing methods work against this principle. Learner-to-learner discussions are extremely underused. Co-operative learning, if used correctly, is highly brain compatible. Talking, sharing and discussing are important because humans are biologically wired for language and communication. Picciano (2002:27) agrees with Jensen (1998:93), who suggests that educators should use discussion questions or allow learners to pair up and share personal experiences.

D'Amico (1953:213) lists other teaching practices, which, according to him, hinder a sense of design:

- The neglect in teaching design in craft shops and industrial arts courses.
- Educators emphasise the development of skills and technological precision, while completely ignoring the design factor. This will result in a lack of artistic quality.
- Some educators permit or encourage the imitation of commercial work. The consequence of this teaching practice will leave children with no confidence in their own work and talents.

This shows that educators cannot present a list of rules when teaching graphic design; rather, they should facilitate the process as described earlier. In order to properly facilitate this process, the educator should also have a thorough understanding of all teaching methods, including traditional teaching methods.

2.9 Traditional teaching methods

Root-Bernstein (2001:77) argues that it is trickier to prepare and teach lessons to introductory learners than to advanced learners, because the basics are more difficult to master and simplify.

For this reason, Root-Bernstein (2001:156) suggests that the educator should start with what the learners already know and then find the practical correlation that bridges this known thing with the unknown one that needs to be understood.

Educators should, when they teach, bear in mind that they need to address the left and right hemisphere of the brain (Jensen, 1998:39; Sain, 2007). Jensen (1998:39-42) makes the following practical suggestions for educating “both brains”:

- Learners must be exposed to a wide variety of methodology. This means rotating individual and group work, drama, music, presentations, self-directed work, computers, guest speakers and travel to new locations, even if it is just to another classroom.
- Educators should be aware of the attentional system of the brain. Attention can be external or internal, focused or diffused, relaxed or vigilant. The learners should be asked to identify appropriate objects of attention (often it is a teacher) and to maintain that attention until instructed otherwise. They must ignore other, often more interesting, objects of attention. This is a reasonable request if the learning is relevant, engaging and chosen by the learner.

In addition, Jensen (1998:80-81) suggests that learners must be personally engaged (Herrington, 1997:94). This can be done through the use of journals, discussions, sharing stories and reflecting on things, people and issues. Educators, for example, can ask learners to write about a disaster in the

news, current events or personal issues. If appropriate, learners can share their thoughts with other learners. It is also a good idea to help learners make personal connections to the work they do in class. For example, let learners read the “Letters to the Editor” in a newspaper and discuss or assess these critically. Bear in mind that feelings and emotions are a form of learning and that this form of learning is just as essential as any other part of education.

Oonk, Goffree and Verloop (2003) as well as Nelson and Zobairi (1999) agree with Hillel and Holmes (1995:1), who believe that educators should challenge children to think further than a simple, closed, “right” answer. They recommend changing the structure of questions in all curriculum areas. For example, consider the difference in the answers to the following questions:

- “What’s the time, Mr Wolf?”
- “What is time, Mr Wolf?”

Educators can advance the development of cognitive skills by asking questions like this and encouraging and directing the discussions that will follow. These cognitive skills will assist children in dealing with the growing amounts of information to which they are exposed.

This section provides an overall view of educational methods in general. Some of these methods have been around for many years, and some are more recent. The question that arises from this is whether these methods are still effective in the new generation and whether these methods can also be applied to graphic design education?

To answer this question it is necessary to take a closer look at some of the teaching methods.

2.9.1 Analysing art

According to Parks and Black (1992:289) most educators are of the opinion that picture analysis is too complicated or abstract for elementary school children. However, in practice, children take pleasure in knowing words to explain what they see or sense. These terms can then also be used to study other works of art, such as buildings, photographs, sculptures and so on. The knowledge of the terms to describe the characteristics of a picture or other artworks more clearly will be the result of this exercise.

A writing extension of this exercise can include the following instructions (Parks & Black, 1992:289):

- “Describe the elements of style that you look for in a picture.”
- “Use the elements of design to describe a picture of your choice.”

Goodman has developed a complex conceptual apparatus to assist art students (Abdelal, Herrera, Johnston & McDermott, 2006; Jones & O’Donnell, 2010). Gardner (1982:61) explains Goodman’s scheme as allowing arts students to get out of many tricky situations that have previously affected artists. For example, one can progress profoundly into analysis without dealing with matters such as which art has superior value, which is attractive and which is not. One rather focuses on recognising those features of a symbol that add to its functioning as a work of art. The artist deals with a range of questions on how various artistic symbols work in specific art forms and works of art. Thus the study of the arts becomes much more manageable and less subtle than before. By following Goodman’s analysis, one may ascertain a model of what the skilled artist can accomplish. One can investigate the skills required to become sensitive to or create works of art in a skilled way.

In Goodman’s view, as stated by Gardner (1982:63), works of art can also be gainfully viewed as samples. To simplify the matter, accounts of the world

that strike us as being “fair” or “right” are those that seem to encapsulate a major aspect of our own experiences, perceptions, attitudes and intuitions. Goodman himself is unwilling to name certain artists or works as intrinsically “fairer” than others. Yet his writings show the kinds of criteria he would use.

2.9.2 Education by means of movement

Another educational method, found in the literature, is the use of movement. Morrow (2007) agrees with Jensen (1998:88-89), who suggest that educators should provide room for movement. Physical education, movement, drama and the arts can all form a single, continuous theme. There is no need to wait for an exceptional occasion. Here are several examples of accessible strategies:

2.9.2.1 Goal setting

Instruct learners to pair up. They must then either charade or mime their goals to their partner or go for a short walk while setting goals. Ask them to respond to three focusing questions, such as (Jensen, 1998:88-89):

- “What are my goals for today and this year?”
- “What do I need to do today and this week in this class to reach my goals?”
- “Why is it important for me to reach my goals today?”
- The educator can formulate questions or ask the learners to create their own questions.

2.9.2.2 Drama, theatre and role-plays

Educators should make role-play a daily or at least a weekly activity. Learners can use charades to review main ideas or they can put together an improvised pantomime to dramatise a key point. Another option is a one-minute commercial to advertise upcoming learning contents or to review previous learning contents (Jensen, 1998:88-89; McSharry & Jones, 2000; Shearer & Davidhizar, 2003).

2.9.2.3 Energisers

Jensen (1998:88-89) provides the following examples of energisers:

- Learners can measure things in the room by using their own body and report back on the results. For example, “This cabinet is 99 knuckles long”.
- Play the Simon-says game. For example: “Simon says point to the South” or “Simon says point to five different sources of information in this room”.
- Divide learners into different teams and do jigsaw puzzles with enormous mind-maps.
- Encourage learners to get up and touch various things. The educator can, for example, instruct a learner to touch seven colours in a specific order on seven different objects.
- Implement a move-around system by using memory cue words. For example: “Stand in the room where we first learned about...”.

- Allow learners to choose a partner and then play a tug-of-war game. Provide a list of topics already discussed in class and let each learner pick one. The goal is for learners to convince their partner in only 30 seconds why their topic is more important. After this verbal debate, the pairs must form two teams for a gigantic tug-of-war physical challenge. All the partners are required to be on opposite sides.

2.9.2.4 Cross-laterals

Both hemispheres of the brain can be forced to interact by using arm and leg crossover activities. There are several books available on these activities, including *Brain gym* by Paul Dennison, as well as *Smart moves* and *The dominance factor* by Carla Hannaford. Some examples of these activities are (Dennison & Dennison, 1986; Hannaford, 1996; Jensen, 1998:88-89):

- Patting your head while rubbing your belly.
- Marching in one place while patting opposite knees
- Marching in one place while patting opposite shoulders.
- Marching in one place while touching opposite elbows or heels.

2.9.2.5 Stretching

Carla Hannaford (Jensen, 1998:89) believes that: “Arts and athletics are not frills. They contribute powerful ways of thinking, and skilled ways of communicating with the world. They deserve a greater, not lesser portion of school time and budgets.” Norman Weinberger (Jensen, 1998:89), a scientist in the Department of the Neurobiology of Learning and Memory at the University of California, states: “Arts education facilitates language development, enhances creativity, boosts reading readiness, helps social development, general intellectual achievement and fosters positive attitudes towards school.” Jensen (1998:89) concludes by stating that this attitude has

become more and more dominant among scientists who study the brain and that it is time for educators to catch on.

Class rituals like clapping patterns, cheers, movements or songs can engage learners instantly. These rituals can be used to announce arrival, departure, a celebration or getting started on a project. The ritual should be fun and speedy, but changed weekly to prevent boredom. Also bear in mind that rituals like this must be age appropriate (Jensen, 1998:80).

Education by means of movement as listed in the preceding paragraph is an education where learners must be physically involved to improve the learning process.

As indicated in the many instances described in the preceding paragraphs, communication and relationship is foundational to graphic design and dialogue is subsequently essential in graphic design education.

2.9.3 Using dialogue in education

Lipman (2003:91-92) states that Martin Buber is well known for his adoption of dialogue. Buber regards it as discourse in which “each of the participants really has in mind the other or others in their present and particular being, and turns to them with the intention of establishing a living mutual relation between himself and them”. He describes these dialogues as follows:

- Debates in which each handles the other as a position rather than a person.
- Conversations in which one is essentially concerned with making an impression on the other.

- Friendly chats in which each thinks himself supreme and lawful, and the other disputed.
- Lovers' talk in which each enjoys their own secret and valued experience.

2.9.4 Utilising emotions in education

Communication and interaction, especially within the context of a graphic design product, is unthinkable without emotion being involved. In addition, Claxton (1999:37-57) claims that learning is fundamentally an emotional business. Educators, therefore, should arrange learning around emotional contexts. Emotional learners include those who are bored with the lesson, who are anxious about an upcoming test, who are energetic about an upcoming sporting event, etc. Educators must try to integrate these emotions into the curriculum, instead of trying to eliminate them in order to proceed with the "serious cognitive" learning. Renate Caine, professor at California State University, San Bernadino, says that when educators ignore the emotional components in any of their subjects, they deprive learners of meaningfulness (Jensen, 1998:93-94). Emotions drive attention, meaning and memory. In other words, if educators engage in emotions, attention, meaning and memory will follow naturally.

Schutz and DeCuir, (2002) as well as Linnenbrink (2007), agree with Jensen (1998:94), who suggests that educators must productively invite or purposely engage emotions. This is different to randomly evoking emotions. The latter is cheap and disrespectful, whereas the first case can be seen as intelligent teaching. Here are some specific strategies for engaging productive emotion:

2.9.4.1 Expression

The educator should provide the learner with a secure and positive way to express emotions, both positive and negative. The educator might supply a box in which learners can toss their negative feelings. Relaxation exercises or a physical activity like stretching or games can also be used. Alternatively, encourage dialogue between partners or in groups, or give internal reflection time for journal writing or goal setting.

2.9.4.2 Movement

The educator can use role-play, theatre, drama, mime, art and simulations to ensure that the learning engages positive emotions. Other options that can be implemented are music, playing of instruments, singing, shouting cheers, debates, personal stories, improvisation, dance, quiz-show games, exercises, stretching, play, fieldtrips and student or guest speakers.

2.9.4.3 Stakes

Raise the stakes in the learning. For example, evoke emotional investment by setting goals or the possibility of public presentations. Learners are in general enthusiastic to do big or public projects if they have resources and peer support.

2.9.4.4 Novelty

An educator will create distress if there is too much novelty, but also boredom if there is too little. Novelty must be relevant, social and fun. To provide this, educators can create immersion environments by redecorating the classroom into a city, a new place or a foreign country. Learners can also

design the classroom as a rain forest, an airplane, a business or another country, for example.

2.9.4.5 Sharing

Develop co-operative projects to create greater peer collaboration. Use partners and established teams or temporary groups for particular activities.

2.9.4.6 Apprenticeships

Provide apprenticeship relationships with experts to support relationship-driven learning. Examples of this are multi-age classrooms, big-brother/big-sister programmes, and community-active adults.

2.9.4.7 Think big

Fewer more complex projects are suggested. Develop multi-level projects, but provide learners with sufficient time and resources.

2.9.5 Picture books as educational tool

The role of visual images is undoubtedly part of graphic design and its education: sketches, diagrams, images, photographs, etc. Exposure to visual images increases in the development of children when introduced to many pictures bound in books. Hyun (2008) and Crawley (2009) agree with Hillel and Holmes (1995:1), who provide the following reasons for using picture books as an educational tool:

- Both educators and children are familiar with picture books.
- Picture books are used on a regular basis in classrooms at all levels of teaching.

Educators have used picture books effectively for a long time. They have used a variety of ways of using picture books, putting emphasis on aspects such as genre, plot and character, setting and mood, and the style of the author. According to Hillel and Holmes (1995:1), this is still very applicable, but learners should also get the opportunity to participate in focused discussion of their own work and the work of their peers. With these discussions Hillel and Holmes want to expand the curriculum, using picture books as a focal point and as a vehicle for thinking about the issues raised. Educators can use carefully selected picture books as a means to initiate discussion and to enhance a child's social awareness, self-awareness, thinking skills, critical interaction with text, creative response and reflection and processing skills.

Hillel and Holmes (1995:1) believe that picture books can be used for a broad range of curriculum frameworks. They also believe that the use of picture books is not limited to young children. Finally, they believe that picture books can raise moral, ethical and philosophical issues.

Picture books encourage critical and creative thinking skills in an extensive range of topics. In other words, picture books assist in unlocking ideas. Educators should always attempt to improve the structure of the general discussion in the classroom in order to provide a valid model for intellectual investigation. Picture books can be the foundation for this investigation, they are not only valuable because of their well-written and well-illustrated texts; many ethical and philosophical issues are essential elements in their narratives. Most of the time these issues are also part of the curriculum; therefore integration like this will be ideal (Hillel & Holmes, 1995:1-2).

Hillel and Holmes (1995:2) recommend that educators work from a basis of enquiry when discussing picture books. This will provide an environment for children to expand their instinctive ability to wonder about the world in their need to formulate a meaning of the world. When reading, children summarise the author's intentions in their minds according to their own common sense. This is why using literature from a basis of enquiry will provide children with a chance to fully explore concepts and issues, so that not only the meaning of the text is enhanced but also their sense of the world is enriched. Through this, children can develop their own opinions and also learn how to value those of their peers. Other educational benefits provided by picture books are as follows:

- Learners learn that it is all right to change one's mind, provided that there is evidence to support this change of mind.
- Learners learn to be accountable for their decisions.
- Learners learn that it is acceptable to disagree with friends.
- Learners learn to criticise ideas, not people.

2.9.6 The role of the community of inquest in education

A critical, inquiring, explorative, mind is essential in life, likewise in graphic design and its education. Dewey (Lipman, 2003:92) recommends the classroom becomes a community of inquest where logical arguments are essential.

Lipman (2003:94) states that in order for education to evolve around enquiry the classroom must be transformed into a community of friendship and teamwork (Horne *et al.*, 2007; Dunne & Rawlins, 2000). These attributes can

be seen as being positive to a learning atmosphere, rather than being partially undesirable and competitive. Communities of inquest are seen as:

- desirable reflections;
- shared thoughts;
- the promotion of literacy and philosophical imagination;
- the encouragement of a deep reading; and
- delight in dialogical books.

The following are characteristics of a community of inquest:

2.9.6.1 Shared thoughts

Lipman (2003:95) argues that, in a drawn out session of private reflection, a person will engage in a string of mental acts aimed at delving into and analysing the subject at hand (Baldwin *et al.*, 1998). “Thus one will engage in wondering, questioning, inferring, defining, assuming, supposing, imagining, distinguishing and so on” (Lipman, 2003:95). In shared thoughts (also called “distributive thinking”), the same acts are experienced, but by different members of the community. “One person raises a question, another objects to an underlying assumption, still another offers a counter-instance” (Lipman, 2003:95). The intellectual distance travelled may be the same, but the second scenario illustrates how there can be a thinking community.

2.9.6.2 Impartiality

An unbiased inquest pursues an exploration of a matter of importance in an open and self-corrective way (Lipman, 2003:96).

2.9.6.3 Challenging as a procedure

When learners argue among themselves, it is not unusual for them to challenge each other, often rather intensely. They insist on knowing why this judgement is supported, or what the meaning of this saying is. The community of inquest experience teaches them that it is good to challenge, but that the challenge does not need to be fiery (Lipman, 2003:97).

2.9.6.4 Reading

A class session containing a community of inquest aims at rousing the members of the class to (Lipman, 2003:97):

- be reflective;
- engage in reflective reading;
- engage in reflective questioning; and
- engage in reflective discussion.

This means that each session should start with a practice that can be relied on to incite the hunt for meaning.

2.9.6.5 Questioning

After completing the reading, the teacher invites those learners who are confused to approach their confusion with a question. These questions are then written on the board, with the name of the learner who is contributing to the work of the community. The completed list of questions represents the many perspectives of the learners of the community on the discussed topic. It also represents possible points for discussion (Lipman, 2003:98).

2.9.6.6 Discussion

As clarified by Lipman (2003:99-100), the discussion often starts by turning to the learner who posed the question that the community decided should be discussed first. This learner may be asked to elaborate on the origin of the question, the reasons for raising it and its importance. With the learner's answer, others join in so as to verbalise whether they agree or disagree with what is being said. It is likely that more than one line of questioning will emerge, as the reading and questioning have stimulated many interests among the learners, and they will want to follow up on these.

2.9.7 Education through entertainment

Besides graphic design being a medium of communication, it is also a medium of entertainment. In fact Walt Disney once said that he wants to entertain children in order that they will learn. Of course educational entertainment, called edutainment, has to adhere to certain requirements if it is to have the result of learners actually learning, (Slabbert, De kock & Hattingh, 2009: 97). Jensen (1998:80) is of the opinion that educators should represent a love for learning and show a passion for their job (Ferguson, 1965; Yang, 2009). They can do this by bringing something to class with great excitement, for example a true emotional story, a new CD or book, or even an animal.

Celebrations can also build excitement in the class. Acknowledgements, parties, high-fives, food, music and fun can be used. The opportunity should be created for learners to "show off" their work and also for other learners to comment on it. In this way they can learn from each other in a playful manner (Jensen, 1998:80).

Further, Jensen (1998:80) suggests setting a controversy. This could include a debate, dialogue or argument. Learners should be encouraged to express

their opinions. This will involve their emotions. Research done by McGaugh (Jensen, 1998:80) indicates that when emotions are engaged right after a learning experience memories of the experience are much more likely to be recalled and accuracy will improve. Theatre and drama can also create strong emotions.

D'Amico (1953:12) recommends that educators use extraordinary and exciting events as a starting place for young artists. These could include visits to the circus or an amusement park. Special holidays and seasonal events can also be added to this list. These will all stimulate even the most unimaginative learner, as well as employ memory and direct observation.

2.9.8 Learning from the experience of others

The community of inquest is, on the one hand, learning together, and it therefore is testimony to the value of shared experience. On the other hand, these shared experiences embody an exaggeration of the effectiveness of the learning process, since students who think that all learning has to be done by themselves come to realise that they can also benefit from the learning experiences of others (Christie, 2001; Epple, Argote & Devadas, 1991; Lipman, 2003:93).

According to Lipman (2003:94) it is not unusual to find university students who stop listening when a fellow classmate begins to talk, because:

- they cannot imagine that their peers might have experiences of benefit to them (in which case they have much to learn by listening to them);
- it supports their own principles (where they might be prepared to hold their own principles more strongly);
- they disagree with their peers, in which case they might have to rethink their own opinion.

2.9.9 The teaching of drawing techniques

The first and introductory products related to graphic design are, of course, making drawings. Educators should teach techniques, but not as an isolated activity. Drawing techniques should rather be a means of helping the learner to express themselves (D'Amico, 1953:20; Tahta, 2007).

D'Amico (1953:16) provides the following guides for the educator in assisting the learner:

- Never work directly on a learner's picture – if something needs to be drawn in order to explain, do it on a separate piece of paper and throw it away afterwards.
- Assist in the selection of suitable materials for the type of project, as well as the learner's ability and age.
- Help to clarify ideas through discussion.

These simple guidelines will aid in improving the learner's self-confidence and encourage the learner to solve their problems.

2.9.10 Education and comprehension

Solving problems presupposes understanding. Capdevielle *et al.* (1992:139) provide the following formula for better understanding:

- Ask the question – what is it like? In answering this question, think of all the different aspects, consider all factors, describe it and compare it.
- Analyse it. In other words: how does it work?

- Then concentrate on how well it works. Determine what is positive and what is negative about it. Think of interesting ways to improve it.
- The next question that can be considered is: what are the causes and consequences?
- And lastly, what is uncertain about it?

2.9.11 Education and concentration

One of the most valuable assets that a human being could possess is perseverance and this quality is in high demand when someone needs to produce a creative product within a context of a multitude of requirements, demands, conditions and responsibilities. This requires the acquisition of an extraordinary attention span.

Jensen (1998:50) has some practical suggestions for gaining learners' attention. The easiest way to get their attention is by changing the location. Research has shown that the brain's posterior attention system is specialised to react to location, rather than to other cues like colour, hue, shape or motion. For example, the educator can move around in the class during instruction or instruct the learners to move to different places in the class or even outside. If at all possible, classrooms could be switched for a day or the class could go on field trips.

Other suggestions described by Jensen (1998:51) are the following:

- The use of music. Instruct learners to bring something to class that makes music. Let them then present their new learning to one another in small groups by using the "instrument".
- Guest speakers.

- The use of entertaining, stimulating rituals for class openings, closings, and most of the repetitious classroom activities. For example, an important daily summary can be introduced by a double clap and foot stamp.
- A change in the educator's voice, for example the tempo, volume, etc. can also get the learners' attention.
- Other attention getters: props, noisemakers, bells, whistles, costumes, singing, etc.

However, Jensen (1998:51) warns the educator to use these suggestions only once or twice a day, because educators are not circus performers.

The list of teaching methods can go on without end, but through this I wanted to show that there are many different teaching methods – some very traditional and some more modern.

To answer the question posed in the beginning of this section, one needs to contemplate whether these methods will work on the new generation learner, as explained before. Slabbert, De Kock and Hattingh (2009:28) find that the youth of today, also called the digital natives, are extremely knowledgeable about things relating to the digital world. Because of this they struggle with face-to-face communication and “real” relationships.

When we consider these findings we cannot help wondering how an educator will comply with the demanding challenges of educating our youth today in general, but even more specifically the graphic design student. This is why facilitating authentic lifelong learning is suggested by Slabbert, De Kock and Hattingh (2009:31).

2.10 Facilitating authentic lifelong learning

My exploration in search of educational practices that are aligned with quality of life and nurturing potentials led me to the following aim of education: the aim of education is to empower learners to maximise (completely develop and fully utilise) their human potential (fundamental or essential human virtues/qualities/dispositions) by facilitating authentic lifelong learning (resolving real-life challenges) in order to create a safe, sustainable and prosperous future for all (Slabbert, De Kock & Hattingh, 2009:49).

2.10.1 Learning – a constructivist epistemology

If the aim of education is to facilitate authentic lifelong learning, then learning – as the focus of education – has to be defined. The purpose of this paragraph is not to explore the field of learning exhaustively, but only to highlight what would be essential for this research. Claxton (1999:11) provides a very simplistic yet significant definition of learning when he notes: “Learning is what you do when you don’t know what to do.” Slabbert, De Kock and Hattingh, (2009:CD-ROM) define learning within a constructivist context as follows: Learning is the construction of meaning by the learner themselves, who then uses it to do something creatively new. In this regard, Heyligen (1997) explains the constructivist epistemology as follows: “[a]ccording to the constructivist epistemology, knowledge is not passively received either through the senses or by way of communication, but it is actively constructed by the individual through interactions with the environment. Knowledge can therefore not be transferred or transmitted through teaching or instruction. When learners are in interaction with their environment attempting to make sense of the world, they are constructing knowledge through their experiences which constitutes the construction of meaning.”

Research on learning and professional development is pivotal in construing our pedagogical task. Dochy, Gijbels, Segers and Van der Bossche's (2011: xii-xv) overview of the state-of-the-art contemporary learning theories are summarised in Table 2.3.

	Core issues/ concepts	Who learns?	Why do they learn?	What do they learn?	How do they learn?
Billett and Ellstrom The learning curriculum; workplace learning	<ul style="list-style-type: none"> The 'experienced' curriculum Individual contribution Workplace environment Participation Guidance (direct and indirect) 	<ul style="list-style-type: none"> Individuals, and therefore organisations 	<ul style="list-style-type: none"> To remain up to date Growth and development Employability To resolve non-routine problems 	<ul style="list-style-type: none"> Competence Employable outcome Qualifications Interactions that learners engage in are central to what they learn 	<ul style="list-style-type: none"> Participation /engagement in enacting a personal curriculum (pathway of engagement in activities) Personal ontogenies Guidance (direct/ indirect) Creative learning
Mezirow Transformational/ transformative learning	<ul style="list-style-type: none"> Transformational/transformational learning Experience Critical reflection Development Learning as a meaning-making activity (meaning schemes, meaning perspectives) 	<ul style="list-style-type: none"> Individuals 	<ul style="list-style-type: none"> Disorienting dilemma Disruption of their world view 	<ul style="list-style-type: none"> New meaning perspectives To become more reflective, critical and open 	<ul style="list-style-type: none"> Making meaning/ interpretation Critical reflection Discourse Action Perspective transformation
Kolb and Boud Experimental Learning Theory	<ul style="list-style-type: none"> Experiential learning Experience Learning styles 	<ul style="list-style-type: none"> Individuals 	<ul style="list-style-type: none"> Conflict Differences Disagreement 	<ul style="list-style-type: none"> Creation of knowledge To relearn ideas/beliefs 	<ul style="list-style-type: none"> Grasping/ transforming experience: <ul style="list-style-type: none"> - Concrete experience - Reflective observation - Abstract conceptualisation - Active experimentation
Lave and Wenger Situated learning	<ul style="list-style-type: none"> Situated learning LPP Community of practice Social nature of learning/ contextualised 	<ul style="list-style-type: none"> Members of the community of practice Newcomers and old-timers 	<ul style="list-style-type: none"> To develop skills and knowledge To get full membership To handle creative problem-solving 	<ul style="list-style-type: none"> Construction of identities/ personalities Skills 	<ul style="list-style-type: none"> Participating in community of practice – observing, working together/ sharing with experienced workers LPP

Senge Systems thinking theory	<ul style="list-style-type: none"> • Learning organisation • Fifth discipline strategy • Principle of leverage • Limits to growth • Shifting the burden • Systems thinking • Shared vision • Team learning (mental models) 	<ul style="list-style-type: none"> • Individuals and therefore organisations 	<ul style="list-style-type: none"> • Individuals and business growth • To stay competitive 	<ul style="list-style-type: none"> • To become healthy, successful learning organisations • Changes in thinking • To manage change 	<ul style="list-style-type: none"> • Five building blocks: <ul style="list-style-type: none"> - System thinking - Personal mastery - Mental models - Building shared vision - Team learning • Alter limiting factors
Argyris and Schön Organisational learning	<ul style="list-style-type: none"> • Organisational learning • Reflection-in-action • Reflection-on-action • Theories of action (espoused theory and theory-in-use) • Single loop learning • Double loop learning 	<ul style="list-style-type: none"> • Individuals • Organisations 	<ul style="list-style-type: none"> • To survive in an ever-changing environment • To become reflective practitioners 	<ul style="list-style-type: none"> • To challenge assumptions • To construct new descriptions/re-frame • To find solutions 	<ul style="list-style-type: none"> • Single-loop/model I • Double-loop/model II • Reflection
Engeström Expansive learning and inter-organisational learning	<ul style="list-style-type: none"> • Expansive learning • Activity theory • Contradictions • Knotworking and boundary crossing • Co-configuration • Multi-voicedness • Historicity • Change laboratory 	<ul style="list-style-type: none"> • Parties engaged in activity systems • Organisations (inter-organisational learning) 	<ul style="list-style-type: none"> • Contradictions • Double bind 	<ul style="list-style-type: none"> • New forms of work activity • What is not there yet 	<ul style="list-style-type: none"> • Cycle of expansive learning: <ul style="list-style-type: none"> - Questioning - Analysing - Modelling - Implementing - Reflecting - Consolidating

Table 2.3: Theories of learning (Dochy *et al.*, 2011).

2.10.2 Authentic learning

One of the learning theories in Table 2.3, namely the experiential learning of Kolb and Boud, is developed from the knowledge of how learning occurs naturally or authentically in human beings. Slabbert, De Kock and Hattingh (2009:68-76) use Kolb's experiential learning cycle to identify the

characteristics of authentic learning. Authentic learning is a process in which learners are immersed in a challenging real-life experience, followed by a reflection on that experience – during which the challenging real-life experience is translated into dynamic knowledge (Korthagen, 2001:43). Then a construction of that experience is made in the form of cognitive schemata and mental models that transcend the direct experience (its knowledge and skills) (Van Merriënboer & Paas, 2003:5). Dispositions and qualities in the form of essential human virtues are acquired through this as personal development of the highest order (Alexander & Potter, 2005:108). This will ensure the transformation of the human being as the ultimate educational purpose (Barnett, 2007:101-103). This energises and enhances the foundational disposition of a will to learn (Barnett, 2007:101; Frankl, 1984:121), which compels the learner to explore a new challenging real-life experience.

2.10.3 Facilitating learning

By reflecting on the learning theories in Table 2.3 and relating them to the aim of education formulated earlier, it seems as though all these learning theories might contribute to the challenge of learning in a super-complex world with an unknown future (Barnett, 2007: 6). However, the necessary kind of learning suggested by the educational aim has to be achieved. Slabbert, De Kock and Hattingh (2009:101) suggest that this is to be done through facilitating authentic lifelong learning in the following way: facilitating learning requires the deliberate and purposeful intervention of a facilitator of learning to confront learners with authentic real-life challenges that they have to resolve themselves while continuously challenging the learners in the most efficient and appropriate way for the sole purpose of them producing the highest possible level of learning quality in order to achieve the educational aim.

However, facilitating learning is clouded with misconceptions. According to Rooth (2000:35), it is “*not teaching, not telling, not lecturing, not preaching, and not directing [guiding]*”. In fact, facilitating learning is distinctively different from teaching and it is also qualitatively different from teaching. Facilitating learning is the only justifiable practice because of its direct concern with learning, the learning process and the quality of the learning. Thus, for all practical purposes, facilitating learning is the direct opposite of teaching and therefore one will find no teaching in facilitating learning (Slabbert, De Kock & Hattingh, 2009:100-101).

According to Slabbert, De Kock and Hattingh (2009:102), facilitating learning has three purposes and these three purposes relate directly to learning as the foundation of all education. The initiation of learning is the first purpose of facilitating learning. This gets learners involved in experiencing a real-life challenge that would create a need to learn through the search for meaning. The initiation of learning is facilitated through the facilitating learning functions of learning task design (LTD) and the learning task presentation (LTP).

The second purpose of facilitating learning is learning itself. The purpose is for learners to engage in the learning process through the construction of meaning. Learning is achieved through authentic learning (Slabbert, De Kock & Hattingh, 2009:102).

Maintaining learning is the third and last purpose of facilitating learning. This ensures that the learner remains engaged with the learning process until the highest possible quality of learning is achieved through the relationship of enhancing meaning. Maintaining learning is facilitated through learning task execution (LTE) in the form of metalearning (ML) and co-operative learning (CL), learning task feedback (LTF) and learning task consolidation (LTC) (Slabbert, De Kock & Hattingh, 2009:102). Table 2.4 summarises the facilitating learning process:

Facilitating Learning		
What is the major purpose?	What are the required relationships to be established?	What is the facilitating learning function?
Initiating Learning	Relationship for searching for meaning	Learning Task Design (LTD) Learning Task Presentation (LTP)
Learning	Relationship for constructing meaning	Authentic Learning (AL)
Maintaining Learning	Relationship for enhancing meaning	Learning Task Execution (LTE): • Metalearning (ML) • Co-operative Learning (CL)
		Learning Task Feedback (LTF)
		Learning Task Consolidation (LTC)

Table 2.4: Facilitating learning (Slabbert, De Kock & Hattingh, 2009:102).

The following paragraphs provide a description of the facilitating process in terms of its functions, as proposed by Slabbert, De Kock and Hattingh (2009:98-127).

Facilitating learning starts with the learning task design (LTD), which is a real-life challenge that needs to be resolved. A real-life challenge can be in the form of an existing real-life problem that needs to be solved, or a continuous need to improve quality of life. Hill (S.a) agrees that the design processes in problem solving for real-life contexts are very creative, dynamic and interactive. Furthermore, they engage exploration and encourage considerations of technology, human and environmental interactions. For this reason the learning task must be a real-life challenge that would demand the execution and expression of artistic qualities from graphic design students in an appealing and unique way.

Learning task presentation (LTP) takes place during the first face-to-face contact with the learners for the sole purpose of engaging them in resolving the real-life challenge through engaging in the learning process itself. This function is vital for the success of the learning task operation and will require artistry and creative skill.

Learning task presentation is followed by learning itself in the form of authentic learning. Authentic learning is the foundation of education and for this reason it is also fundamental in facilitating learning. Although authentic learning is not a function of facilitating learning as such, it is a dynamic process operating internally in the learning individual. However, it is crucial for the facilitator of learning to be aware of all the possible and required authentic learning actions operating internally in the individual learner, as well as how they could have an impact on the facilitating learning process in order to ensure the highest possible learning quality.

In order to maintain learning, the next function of facilitating learning is learning task execution (LTE), which is the function of each individual learner. However, if learning itself requires a relationship with what is to be learned in order to construct meaning, then it follows that improving or enhancing meaning would also require such a relationship. There are two possible types of relationships, namely metalearning (ML), in which learners improve meaning individually by themselves, and co-operative learning, in which learners improve meaning with their peers.

Metalearning is the process in which the learner is in complete control over their own learning with the purpose of ensuring the highest quality of learning. This is achieved through a continuous process of reflection before learning, during learning and after learning through the following metalearning strategies, namely planning one's learning, executing one's learning, monitoring one's learning and assessing one's learning. Metalearning produces an active, effective, independent, lifelong learner. Through metalearning, the learner is able to acquire the fundamental intrapersonal human virtues: self-confidence, motivation, initiative, effort, perseverance, resilience, common sense, responsibility, integrity, independence, joy and love.

Slabbert, De Kock & Hattingh (2009:112) describe co-operative learning as taking "place when learners in small groups co-operate to learn with the

exclusive purpose to increase the quality of each other's learning in order to maximise their individual and collaborative potential". Thus, co-operative learning (CL) constitutes the relationship of sharing meaning with others. Jacobs, Power and Inn (2002:78) identify the value of co-operative learning as follows:

- It is a social support channel for learning where students can communicate freely on their ideas and feelings.
- It can improve the success rate of all students because they are working towards a similar goal.
- Students can challenge each other's ideas that can improve the quality of learning.
- Students get in contact with different approaches towards solving problems.
- Students clarify things for themselves by explaining concepts to other students.
- Learning is very effective when talking, listening, explaining and thinking with others.
- Communication skills improve through co-operative learning.
- It improves creative thinking.
- Groups are more capable of handling challenges than individuals.
- It improves social skills, which are extremely important in multicultural settings.

Through co-operative learning the learner is able to acquire the fundamental interpersonal human virtues: humanisation, communication, dealing with feelings, justice and forgiveness, love, leadership.

In order to further maintain learning, learning task feedback (LTF) is the next step in the process of facilitating learning. Learning task feedback is the feedback provided by the facilitator of learning to the learner while they execute the learning task. This function is generally accepted as one of the most vital and valuable functions in facilitating learning, because its purpose is to execute actions and continuously ask very specific questions throughout the learners' learning that will ensure an improvement in the quality of the learning. The learning task feedback actions and questions are also designed to constitute a hierarchical order, which means that if the first action or question succeeds in ensuring that the learner remains on task or re-engages with the learning task execution, then the learning task feedback was successful in that regard. If success is not achieved and the learner continues to disengage or interrupt their learning, then the next action or set of questions will be used by the facilitator of learning and come into play. However, even if everything goes smoothly and the learner remains on task, the facilitator of learning might deliberately and purposefully intervene in the learner's learning by specifically asking the learners questions that compel them to reflect on the work (learning) that they are doing. The following is the hierarchical structure of learning task feedback as actions of the facilitator of learning (Slabbert, De Kock & Hattingh, 2009:CD-ROM):

- a. Giving verbal or non-verbal recognition as emotional encouragement and support that the learner is progressing successfully.
- b. Asking for clarification when learners are on task in order to make sure that the best possible learning task feedback action will ensue by asking the learner: "what are you doing?" and then "why are you doing it?" in order to determine what the next learning task feedback action should be.

- c. Eliciting metalearning actions through
- (i) Requiring learners to answer their own questions
 - (ii) Requesting reflection by asking learners content-void questions and questions that cannot be answered immediately or with a one word or a short answer. These are questions that compel learners to improve the quality of what they are doing (learning), like:
 - Show evidence that you have thought of everything.
 - Convince me that this is the best way of doing this.
 - How many other ways can this be done?
 - How will you improve this?
 - How will you ensure that ?
 - Explain your thinking behind what you are doing, want to do, have done.
 - What will happen if ?
 - What will you do next and why?
 - When will you know that you have done enough?
 - What does this mean?
 - Etc.
 - (iii) Requiring resourcefulness when learners are requested to find resources that may help them to acquire a solution to the problem.
 - (iv) Demanding resilience when learners are stuck and cannot find a way out.
 - (v) Advising auto-education when learners are referred to resources that they need to consult to find information and/or skills, methods, strategies, techniques to resolve a challenge.

- (vi) Providing edutainment as a last resort and only under such conditions as that the learners have not, could not, or would not find another way to solve the problem or that providing the information is secondary to the higher aim of solving the problem. Although this may entail giving information or transmitting knowledge, the way in which it is done has to remain to provoke, disturb, create disequilibria, cause uneasiness and discomfort, stir, shake, touch the emotions, bring into sharp focus, rock the boat, unsettle, deceive, mislead, impact, stun, be radical, have learners really reflect and think critically and creatively!

The last function in the facilitating learning process is learning task consolidation (LTC). Learning task consolidation bridges the time gap between one learning period and the next. Although the facilitator of learning facilitates the learning task consolidation process, the learners execute the actions to ensure the highest possible learning quality. Learning task consolidation ensures a continued focus on resolving the real-life challenge by ascertaining the rate of the learning progress, assessing the quality of learning and determining what exactly is the next thing to do.

Figure 2.2 depicts the process of facilitating learning in the form of a model of and for facilitating learning.

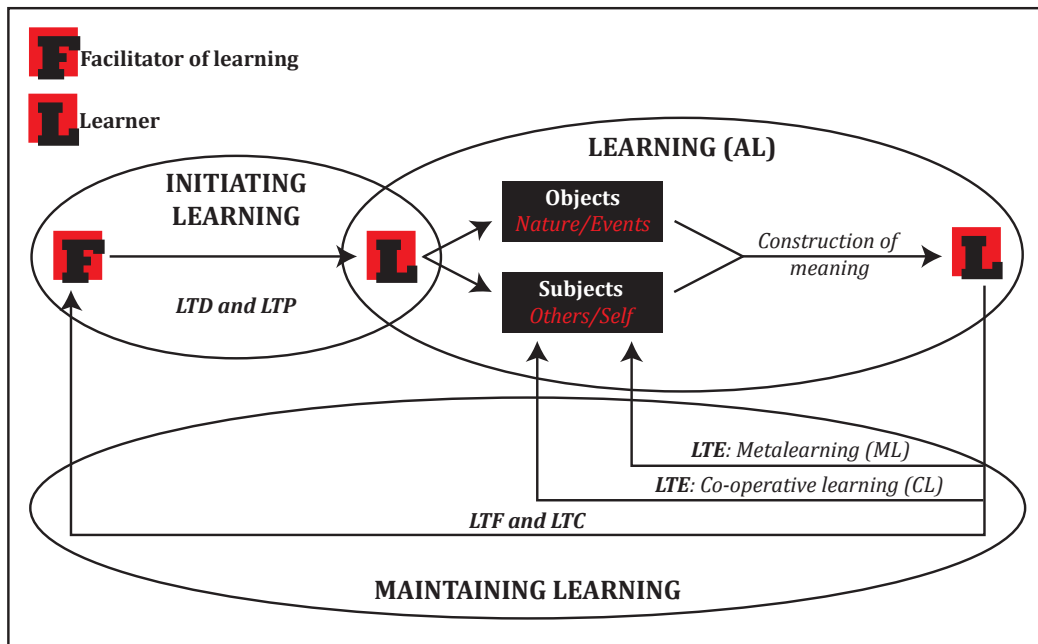


Figure 2.2: A model for facilitating learning (Slabbert, De Kock & Hattingh, 2009:118).

Since the outcome of learning in a super-complex world with an unknown future has to be understood in terms of neither knowledge nor skills, but rather certain kinds of human qualities (Barnett, 2007:102), the notion of qualities needs to be explored.

2.10.4 Human qualities

In the previous paragraphs, the outcome of metalearning and co-operative learning is indicated as the acquisition of fundamental human virtues. A virtue is a particularly efficacious, good or beneficial ethical quality of moral excellence. A virtue is acquired through real-life experience when a situation compels the exhibition of a required virtue.

The following somewhat lengthy excerpts have been taken from Barnett (2007) regarding the importance of human qualities and dispositions in relation to knowledge and skills:

- “Knowledge can be forgotten and skills can atrophy without use; but dispositions and qualities are durable in their nature. They constitute the student’s pedagogical being. It is they that have to be the focus of ‘teaching’...” (Barnett, 2007:102).
- “The *foundational* disposition is that of a will to learn... [All other] Dispositions are the expression of a will to learn” (a will to observe acutely and nuanced – with all the senses and the whole body as a sensory organ; a will to engage; a will to explore; a will to authentic experience; a determination not to quit; etc). “Qualities, on the other hand, are the form those dispositions take” (integrity; carefulness; courage; resilience; self-discipline; restraint; openness; respect etc) (Barnett, 2007:101-102).
- “Through their dispositions and their qualities, students have the capacities to acquire both knowledge and skills. Through their dispositions and their qualities, students become themselves. They flower not just as pedagogical persons, but as persons as such. Students *are* their dispositions and their qualities. Once these have been well enough formed, all else of importance will follow. Without them, nothing of importance will follow...” (Barnett, 2007:101-102).
- “Without dispositions and qualities, nothing else of any substance is possible. Learning is not possible, the acquisition of skills is not possible, and nor is any independence of action or thought possible” (Barnett, 2007:101-102).

2.11 Recapitulation of comments

This chapter consists of a comprehensive literature study of design as a whole, as well as of graphic design. Some attention was given to the history of design and that of graphic design as well as to humanity and design. The

chapter focusses on the elements of graphic design, graphic design as communication, the functions of graphic design, the use of graphic design, the relationship between the graphic designer and the client, globalisation and graphic design, the demands placed on a graphic designer as a person, graphic design ethics, the professional responsibility of the graphic designer, who the graphic designer is as a person as well as theoretical models for graphic design in the contemporary world.

The teaching of graphic design, with the requirements thereof, is also an important discussion point. An overview of arts education gives a foundation for graphic design education, thus there is some reflection on traditional teaching methods as well as the relationship between arts education and graphic design education. The requirements for graphic design education are also discussed with specific focus on intelligence, creativity and imagination.

Specific attention is given to teaching the post-modern student, especially as the physical world has changed, the world of work has changed and the post-modern student has changed. This discussion moves the focus away from the traditional teaching methods to facilitating authentic lifelong learning. This change in focus is because the literature study indicates that traditional teaching methods will not be as effective on the new generation as they were before due to the demanding challenges of graphic design education in the contemporary world. Therefore, facilitating authentic lifelong learning is suggested by Slabbert, De Kock and Hattingh (2009:31) and this will be the focus of the study. In order to clarify facilitating authentic lifelong learning I discuss learning as a constructivist epistemology, authentic learning, facilitating learning as well as human qualities.

As mentioned, facilitating authentic lifelong learning is the focus of the empirical study, but in order for the study to be valid it is essential to first discuss the research design that will be implemented.

Thus, chapter 3 focuses on the research design, including the research methodology, population, sample, data collection techniques and the interpretation of all these individual elements.

chapter 3

Research Design

3.1 Introduction

Chapter 2 consists of a comprehensive literature study, and Chapter 3 elaborates on the research design.

Chapter 3 concentrates on the research premises, the research sites as well as the research methodology. It also describes the population, the sample and the data collection techniques. The data analysis, interpretation and verification are also described.

3.2 Research premises: delineating paradigmatic assumptions and perspectives

Cohen, Manion & Morrison (2007:31) believe: “Research is about understanding the world, and your understanding is informed by how you view the world, what you view understanding to be and what you see as the purpose of understanding.”

Hitchcock and Hughes suggest the following lenses for examining research practice (Maree & Van der Westhuizen, 2009:19):

- Ontological assumptions;
- Epistemological assumptions; and
- Methodological preferences.

These, as well as assumptions about human nature and the mode of enquiry, will now be discussed in more detail.

3.2.1 **Ontological assumptions**

“Ontology refers to a theory of being, which influences how we perceive ourselves in relation to our environment, including other people” (Whitehead & McNiff, 2006:22). In this study I concentrate on how graphic designers perceive themselves in relation to their environment and other people. Specific attention is paid to the relationship between the graphic designer and the client, the demands placed on a graphic designer as a person, and the professional responsibility of the graphic designer. Globalisation, graphic design ethics and the implications of educating the graphic designer also forms part of the ontological assumptions of this study.

I am in agreement with Arendt that human beings are unique and that everyone is an original creation (Whitehead & McNiff, 2006:86). This uniqueness will have an effect on people’s views as well as their perceptions, and this will influence their relationship with their environment and other people. One cannot ignore the fact that even though people are unique, they are all part of other people’s lives (Whitehead & McNiff, 2006:23). In addition, education in a super-complex world, like ours, requires the daunting task of learning for an unknown future. As noted, such an education has to be focused on neither knowledge nor skills as primary concerns, but rather on certain kinds of human qualities. It requires a curriculum and pedagogy that aim at nothing less than the transformation of the human being and that generates a drive towards authenticity (Barnett, 2007). All these factors were taken into consideration when undertaking this research.

3.2.2 Epistemological assumptions

Epistemology is the theory of knowledge, especially with regard to its methods, validity and scope. Epistemology is an investigation of what distinguishes justified belief from opinion. For this reason I made use of participatory action research, since Wadsworth (1998) describes participatory action research as a particular philosophy of knowledge.

Burrell and Morgan make it clear that knowledge can be seen in the following ways (Maree & Van der Westhuizen, 2009:20):

- A positivist view (objective);
- An anti-positivist view (subjective); and
- An interpretive view.

In order to gain a clear understanding of the aspects concerning the research I make use of the three above-mentioned ways.

3.2.3 Assumptions about human nature

Burrell and Morgan believe that humans respond either mechanically to their environment, or they initiate their own actions (Maree, 2007:32). According to them, most social researchers locate themselves somewhere between these two extreme ends. Thus, I also work in between these two opposites by including individual as well as environmental influences in order to ensure that my assumptions about human nature are as accurate as possible.

3.2.4 Methodological preferences

As Whitehead & McNiff (2006:23) note, “Methodology refers to a theory of how we do things”. According to Maree (2007:33) there is a nomothetic

approach and an idiographic approach to methodology. This study concentrates more on the idiographic approach because, according to Maree and Van der Westhuizen (2009:21), this approach puts little emphasis on formulating general laws. The approach focuses on an individual. I am in agreement with Whitehead and McNiff's (2006:23) view that if one interacts with others, these interactions can be a process of creating new knowledge and I realise that this process would require openness to new possibilities.

3.2.5 Delineating a mode of inquiry

McMillan and Schumacher argue that a mode of enquiry can be seen as a collection of research practices based on one's assumptions (Maree & Van der Westhuizen, 2009:21). This research study makes use of a qualitative mode of enquiry.

3.3 Research sites

The study was conducted at Tshwane University of Technology, and permission for it was granted. I explained the reason for conducting the study openly to the participants before they took part.

3.4 Research design

Bless and Higson-Smith (1995:46) describe the research design as a plan of how to determine the nature of the relationship between the variables. According to them, the research design is the backbone of the study and the quality of the study strongly depends on the proper selection of design.

This study fundamentally is a qualitative, interpretive investigation, with participatory action research plus quasi case study research as research

types. Creswell defines qualitative research as follows (Maree, 2007:257): “Qualitative research is an enquiry process of understanding where a researcher develops a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting.”

It is, however, of crucial importance in the context of graphic design education that this research does not focus on the visual graphic design product – although the existence thereof is inevitable. The focus of this research is rather on the process of creating the product – but not in terms of tangible methods and techniques – but in terms of the acquisition of intangible essential intrapersonal and interpersonal human qualities, which manifest in behaviour.

A summary of the research design is given in Table 3.1 and Figure 3.1, followed by a comprehensive layout of the research design.

Data to be collected	Procedure to be used to collect the data	Reason for using the procedure	Contribution of data to main research question	Contribution of data to sub research questions	Timeline
Existing information.	Literature study consisting of: -books -journal articles -internet -conference proceedings, etc.	Existing research.	Discovering different existing education practices.	-Essential qualities for a graphic design student. -Dominant education practices in graphic design education. -Essential learning interventions to ensure a quality graphic designer.	February first year to November second year.
The learning experience of students.	Observations through: -notes -continues observation	I will experience reality as the participants do.	Defining my education practices to ensure students acquire the most essential qualities.	Determining which learning interventions are essential for a graphic designer.	February third year to June third year.
The learning experience of students.	Interviews.	Obtaining information on students' experiences of education practices.	Determining the effectiveness of my education practices.	Determining essential learning interventions to ensure a quality graphic designer.	February third year to June third year.
Views and experience of lecturers in graphic design.	Interviews.	Obtaining direct information from lecturers regarding their views and experiences of different education practices.	Gain knowledge from other lecturers and their education practices.	Determining which education practices are dominant and the effectiveness thereof.	March third year to April third year.
Views and requirements of professional graphic designers.	Interviews.	Will provide information on the professional requirements of a graphic designer.	Assisting me in finding which qualities are essential for a graphic designer.	Clarifying the acquired character of a graphic designer, in other words the essential qualities.	March third year to April third year.

Table 3.1: Research design

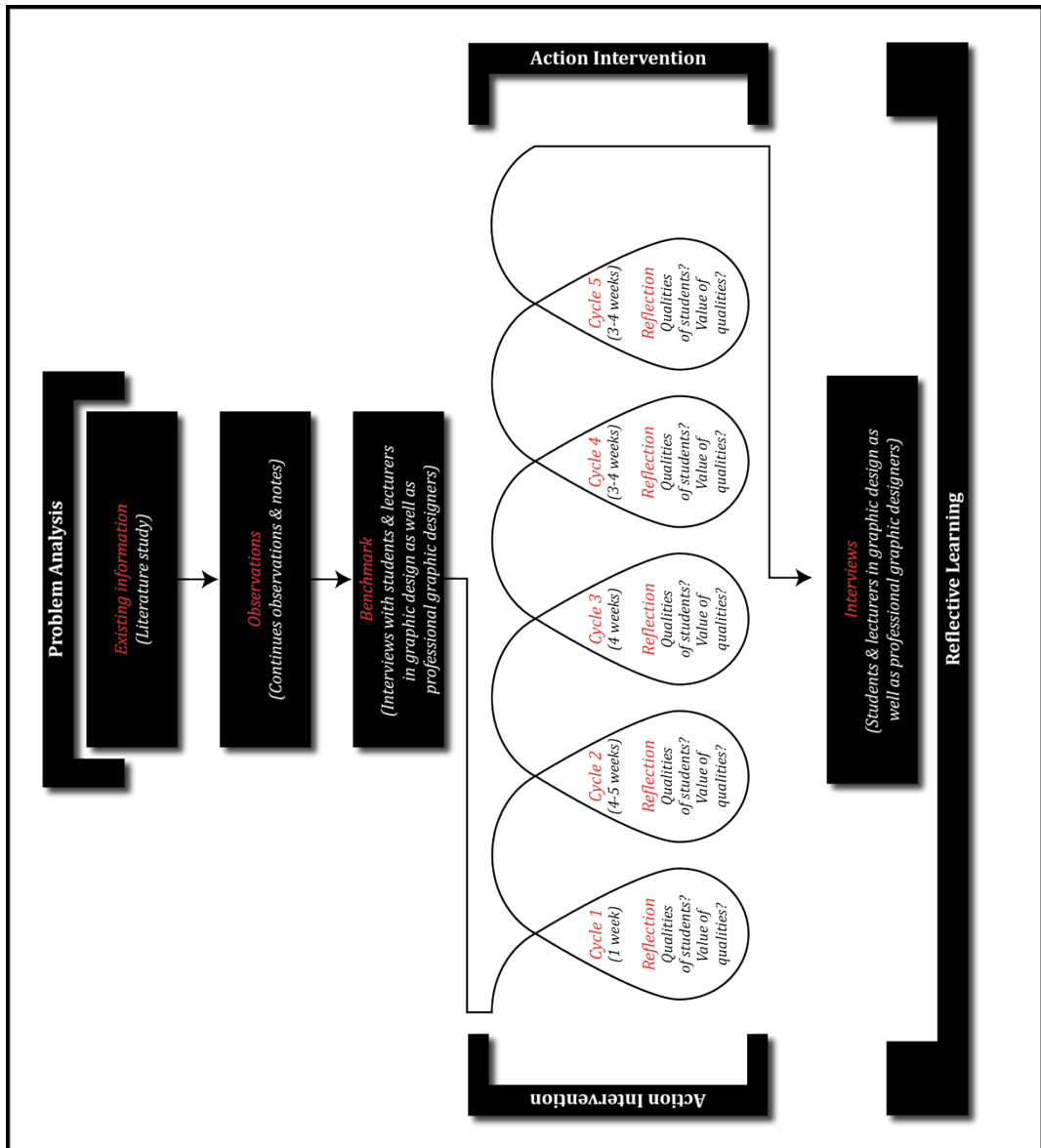


Figure 3.1: Action research design

3.4.1 Research methodology

The following paragraphs provide a comprehensive description of the research methodology.

3.4.1.1 Action research

According to Masters (2000), the origin of action research is not clear. She found different opinions from various authors, but the theory of action research corresponds in all the literature. Kemmis and McTaggart describe action research as follows (Sankaran, 2000): “To do action research is to plan, act and observe and reflect more carefully, more systematically and more rigorously than one usually chooses in everyday life.”

In addition to this definition, I would like to add the following definition to further explain the term: “Action research is social research carried out by a team encompassing a professional action researcher and members of an organisation or community seeking to improve their situation” (Greenwood & Levin, 1998:4).

In this study, the situation that needed improvement was my educational practice. I planned, acted, observed and reflected on my teaching interventions in order to challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life. For this to be successful I needed to combine theory and practice in my research methodology.

Action research combines theory and practice, as well as researchers and practitioners. It is an interactive process in which researchers and practitioners work together on a specific cycle of activities. These activities include problem analysis, action intervention and reflective learning. This happens through change and reflection in a closed problematic situation (Avison, Lau, Myers & Nielsen, 1999:94). I involved fellow lecturers in graphic design, professional graphic designers as well as graphic design students in the problem analysis of this study. Action intervention and reflective learning were the next step. This was in the form of six four-week cycles, involving fellow lecturers in graphic design and students in graphic design. In these cycles, reflection was aimed at finding the existing qualities

of students as well as the value of these qualities. I also wanted to ensure that the situation remained within an acceptable ethical framework.

Somekh (2006:6-8) describes eight methodological principles in action research:

- “Action research integrates research and action.”
- “Action research is conducted by a collaborative partnership of participants and researchers.”
- “Action research involves the development of knowledge and understanding of a unique kind.”
- “Action research starts from a vision of social transformation and aspirations for greater social justice for all.”
- “Action research involves a high level of reflexivity.”
- “Action research involves exploratory engagement with a wide range of existing knowledge.”
- “Action research engenders powerful learning for participants.”
- “Action research locates the enquiry in an understanding of broader historical, political and ideological context.”

Thus, this study integrates research and action in order to develop knowledge and ensure social transformation. In order to do this, it uses existing knowledge as well as the collaboration of the participants and the researcher.

Denscombe, Ponte, Beijard and Ax stipulate the following characteristics of action research (Maree, 2007:124):

- “Action research is practical.”
- “It is focused on change.”
- “It is a cyclical process.”
- “It involves participation.”
- “It is an interactive form of knowledge development.”

This study is, without a doubt, practical and to this end participation by both students and lecturers in graphic design was needed. The study also focused on change. In order to achieve transformation, an interactive form of knowledge needs to be developed through the repetition of certain cases within the research study.

According to Maree (2007:126), action research can be categorised into four types, namely:

- Technical action research
- Practical action research
- Participatory action research
- Emancipatory action research

As noted, this study focuses on participatory action research in conjunction with (quasi) case study research.

3.4.1.2 Participatory action research

Participatory action research brings together a set of new theories in contrast with traditional or old theories. These new theories underline the importance of social and collective processes in order to reach conclusions on a specific

case and on the implications of the change, which will be useful for those whose problematic situation led to the research in the first place (Wadsworth, 1998).

Through my day-to-day learning interventions I found that the traditional theories on teaching practices in graphic design were not effective enough for the post-modern era. The reason for this is that I am working with a post-modern student living in a globalised world. Thus, a positive social change is essential.

Hughes and Seymour-Rolls (2000) believe that participatory action research is a research method in which the main objective is to create a positive social change. Furthermore, it involves all relevant parties in the process of examination in order to modify and improve social change (Wadsworth, 1998). This can be done by reflecting critically on the human qualities that are essential for graphic design students to enhance quality of life in their careers.

Participatory action research, according to Kemmis and McTaggart, can be seen as a spiral process. As noted by Hughes & Seymour-Rolls (2000), “[t]he approach is only action research when it is collaborative, though it is important to realise that the action research of the group is achieved through the critically examined action of the individual group members”.

Maree (2007:126) uses the views of Chambers, Creswell, Mouton, Schurink, Wadsworth, Strydom, Kemmis and McTaggart to describe participatory action research as follows:

- “Studying social issues that constrain individual lives.”
- “Emphasising ‘equal’ collaboration – research participants involved as integral part of design.”

- “Focusing on life-enhancing changes resulting in the emancipated researcher.”

As stated, my goal as an educator in graphic design is to teach more than just the fundamentals, and technical, technological, and physical skills. I want to prepare students for their participation in the community of graphic designers and for the responsibility that they will have in society, thus focusing on life-enhancing changes.

Participatory action research, like any other research, is driven by a “need to know” in order to establish the required changes (Wadsworth, 1998). In order to achieve the above-mentioned goal, the following questions need to be answered:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

3.4.1.3 Case study research

In my practice, I realised I was preparing students to become graphic designers in a technicist way, and thereby ignoring the person that would have a great responsibility in society and the globalised world in which we live. This real-life phenomenon needed exploration through this study by means of a case study – in this research the case is the graphic design

education of the second and third year graphic design students at Tshwane University of Technology.

According to Bromley (Maree, 2007:75), case study research is a “systematic enquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest”. Yin (Maree, 2007:75) adds to this by describing case study research as an empirical investigation that explores a current phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident.

The phenomenon investigated in this study is the educational practices that are needed in order to challenge graphic design students to acquire the human qualities that are essential for a career that enhances quality of life. Case study research is ideal for this kind of investigation, considering the fact that the boundaries between this phenomenon (graphic design education of second and third year graphic design students at Tshwane University of Technology) and real-life context (personal and professional development of graphic design students and professional graphic designers) are not obvious.

Case study research ensures a deeper understanding of the dynamics of this phenomenon. Maree (2007:75) argues that case study research is a multi-perspective analysis in which the researcher can consider more than just the one or two participants in the situation. Therefore, I used groups of second and third year graphic design students, graphic design lecturers, who were the educators of these students as well as professional graphic designers. However, adding the professional graphic designers rendered the study not a pure case study, but rather a quasi case study because the professional graphic designers were not part of the case as such. They did however provide baseline data from which the research could be launched.

Maree (2007:76) argues that the key strength of the case study method is that one may use multiple sources and techniques to gather data. In this

study the tools that I used to collect data were a comprehensive literature study, observations, field notes, a reflective journal and interviews.

3.4.2 Describing the population

A population indicates a limited group that have certain attributes because of the distinct boundaries set by the researcher in the form of specific features (Vermeulen, 1998:55). Mouton (1996:134) adds to this by defining a population as a collection of objects, activities or individuals with the same characteristics that interests the researcher.

In this study, the population was a small group because it is a case study. Case study methods are frequently criticised because they investigate a single case and therefore cannot provide a generalisable conclusion, but, according to Maree (2007:76), this is not the purpose or intent of case study research. Case study research is intended to obtain greater insight into and understanding of the dynamics of a specific phenomenon.

The population of this study was the second- and third-year Graphic Design students at Tshwane University of Technology. At the time of this study there were 24 second-year students and 25 third-year students. I expected to gain greater insight into and understanding of this specific group, because the research problem developed from this group. Additionally, it was a cosmopolitan group of students with different backgrounds, cultures and qualities.

The population further included all the lecturers in graphic design at Tshwane University of Technology as well as professional graphic designers in the Pretoria region.

3.4.3 Describing the sample

A sample is a representative part of the elements in the population chosen to be part of the research. The primary purpose is to obtain a sample that will represent the entire population. Thus, the sample refers to a certain portion within the population that will participate in the research (Vermeulen, 1998:55).

Sampling methods can be divided into probability sampling methods and non-probability sampling methods. Maree (2007:172) describes probability methods as methods based on the principles of randomness and probability theory, whereas non-probability methods are not based on these principles and/or theory.

In this study I used non-probability sampling methods. Maree (2007:177) classifies four main types of sampling under non-probability sampling, namely:

- Convenience sampling
- Quota sampling
- Snowball sampling
- Purposive sampling

In order to obtain an appropriate sample of the population, the method of convenience sampling and purposive sampling was used in this study. Maree (2007:177-178) says that convenience sampling takes place in circumstances where the population elements are selected based on the fact that they are easily and conveniently available. Purposive sampling is used in special circumstances where the sampling is done with a specific purpose in mind.

According to De Vos (2000:191), the size of the sample will normally be determined by the size of the population. A bigger population needs a smaller percentage requirement for the sample group. However, although the

assumption may be that a bigger sample may provide more accurate findings, especially in qualitative research, the sampling may be determined by various factors like its interplay and context. The sampling in this research became acute when the fieldwork needed to start due to unforeseen restrictive circumstances; these circumstances are mentioned at the beginning of the discussion regarding the action research process.

Thus, I made use of convenient and purposive sampling methods by inviting the second- and third-year cohort of graphic design students in the following subjects: General Drawing II and III as well as Illustration II and III. There were 24 second-year students and 25 third-year students. However, only 22 second-year graphic design students and 14 third-year graphic design students were willing to participate in the research. These sampling methods were also used when inviting all five graphic design lecturers at my institution as well as the five professional graphic designers who were prepared to participate in the research at incredibly short notice.

The following paragraphs present a brief introduction of the lecturers in graphic design from Tshwane University of Technology that were invited. However, only the qualifications, experience and areas of specialist teaching will be mentioned here in order to contextualise the responses, whilst still protecting the anonymity of the participants.

The first participant has a BTech in graphic design and has been teaching for the last fourteen years. He specialises in teaching Communication Design, Professional Practice and Research Methodology.

The second participant specialises in teaching Photography within graphic design. She obtained an NDip in photography almost thirty years ago and recently completed her BTech in photography. She has been teaching for the last twenty years.

The third participant has an NDip in graphic design. She worked in the industry for a few years and started her teaching career thirteen years ago.

She specialises in teaching Communication Design, Professional Practice and Typography.

The fourth participant has a BTech in graphic design and he has been teaching for the last five years. He specialises in teaching Figure Drawing and History of Graphic Design.

The last participant also has a BTech in graphic design. She specialises in teaching Illustration for the last three years.

As mentioned, the five professional graphic designers were selected through convenience and purposive sampling. During this sampling process I focused on the experience of the professional graphic designers in the graphic design industry. My aim was to select graphic designers with different levels of experience in order to acquire valid and rich data. The following paragraphs present descriptions indicating qualifications and areas of specialist practice in order for the reader to contextualise the responses. However, this will be brief in order to protect the anonymity of the participants.

The first participant has a BTech in graphic design and has practiced as a graphic designer for the last two years. He is self-employed and specialises in Digital Illustration. His illustrations can be seen in well-known magazines.

The second participant has a BTech in graphic design and has also for the last two years practiced as a graphic designer. He is self-employed and his specialities include Digital Illustration and Web Design.

The third participant has a BTech in brand development and has for more than 15 years worked as a graphic designer. He is self-employed and specialises in brand development with specific focus on corporate identities.

The fourth participant has a BTech in graphic design, with more than 15 years experience as a graphic designer. He is employed by a well-known software development company and he focuses on graphic design software.

The last participant has a BTech in graphic design. He is also a practicing graphic designer with more than 15 years experience. He is employed by a well-known graphic design agency as an art director.

3.4.4 Data collection techniques

In addition to the literature study that was done to collect data, I also made use of observations, field notes, a reflective journal, and interviews.

3.4.4.1 Literature study

A literature study is important because it provides a basic theoretical and conceptual framework (Garbers, 1996:278).

I carried out a comprehensive literature study that included books, journal articles, internet, conference proceedings, etc.

3.4.4.2 Observations, field notes and a reflective journal

Observation was a vital data gathering technique in this study in order to obtain an insider's perspective of the group dynamics and behaviours in different class situations. This allowed me as the researcher to hear, see and experience reality as the participants did. I was able to learn through this experience and reflect on how the setting was socially constructed in terms of power, communication, discourse and language (Maree, 2007:84).

The purpose and focus of the observations during this study was to define my educational practices in order to ensure that I challenge my graphic design students to acquire the human qualities that are essential for a career that

enhances quality of life. The data was collected through continuous observation and note taking during normal lecturing times in the classroom. These observations were invisible to the students, because they entailed nothing more than the normal monitoring of learning. Thus, students who wished not to participate in the research would not experience anything else other than normal learning in the classroom.

Maree (2007:85) describes four types of observations that can be used in qualitative research:

- Complete observer
- Observer as participant
- Participant as observer
- Complete participant

This study used the participant as observer method. As the researcher, I became part of the research process and also worked with the participants in the situation to design and develop intervention strategies. In other words, I became a participant in the situation being observed, and thus was able to intervene in the dynamics of the situation and in some cases even alter it. This gave me an insider's perspective, which assisted in answering the research question (Maree, 2007:85).

Please note that these observations were not any different from the normal observations made by any lecturer in a class situation as part of their pedagogical responsibility. In other words, they were only my observations of the students' progress during education and learning. The only difference was the unobtrusive field notes that I made mentally and physically during the lectures. These field notes were transferred to a reflective journal as soon as possible after a lecture.

3.4.4.3 Interviews

An interview is a direct way of obtaining information and it involves direct personal contact with the participant (Bless & Higson-Smith, 1995:106). According to Maree (2007:87), the aim of qualitative interviews is to discover the participants' views of the world. He is of the opinion that, if the interviewee finds the topic important and finds the interviewer trustworthy, that will supply information that will not be collectable in any other way.

I asked questions that included facts, personal opinions on the facts, and motives and attitudes, as recommended by Leedy and Ormrod (2001:159).

Maree (2007:87) distinguishes between three types of interviews:

- Open-ended interviews
- Semi-structured interviews
- Structured interviews

I made use of semi-structured interviews, because Leedy and Ormrod (2001:159) recommend semi-structured interviews for qualitative research. There must be specific questions in a semi-structured interview, but the researcher also has the freedom to adjust questions in order to obtain more clarity on a certain matter (Leedy & Ormrod, 2001:196).

Audio-recorded interviews were conducted with graphic design students, lecturers involved in graphic design education as well as professional graphic designers. This information broadened my understanding by providing possible positive and negative aspects regarding my educational practices. The interviews with lecturers in graphic design assisted specifically in learning which educational practices were dominant and their effectiveness. The interviews held with professional graphic designers also concentrated on the current graphic design educational practices, but they mainly assisted in clarifying the essentially required human qualities of a professional graphic

designer. Whilst, the students were asked to participate in the interviews in order to obtain more in-depth information on their experiences. These interviews assisted in finding out how effective certain educational practices are.

Although audio-visual recordings were considered – not only for recording interviews, but also for recording classroom interaction and the process of acquiring the corresponding qualities as they manifest in non-verbal and verbal behaviour – such recordings had to be abandoned due to technical and ethical matters (see later in par. 3.8).

3.4.5 Data analysis strategies

Mouton (1996:108) explains the analysis of data simply as the “break up” of information into useable themes, patterns, tendencies and relationships. Similarly, Glesne and Peshkin describe data analysis as “organising what you have seen, heard and read so that you can make sense of what you’ve learned” (Aimers, 2000). Further, according to Maree (2007:37), data analysis can be deductive or inductive. For the purpose of this study an inductive approach to analysing the data was followed.

Maree (2007:99) explains qualitative data analysis as follows: “...to establish how participants make meaning of a specific phenomenon by analysing their perceptions, attitudes, understanding, knowledge, values, feelings and experiences in an attempt to approximate their construction of the phenomenon.”

Although data analysis regarding interviews would normally require specific techniques for such analysis, the nature of the semi-structured interview questions and the subsequent responses in this research turned out not to require such complicated identification and coding of interviews. This

became evident during the first cycle of the action research and is explicated as it evolved during the execution of that cycle.

The analysis of this study was an ongoing process, as described by Maree (2007:99-100). I used an interactive method of data collection, processing, analysis and reporting throughout the research. The reason for using this process was to allow me to go back to the original field notes and my reflective journal and participants to verify or collect additional data. Noticing, collecting and reflecting formed an ongoing process in this research.

3.4.6 Data interpretation

Mouton (2001:109) states that data interpretation is the combining of data for a more conclusive result. Data is interpreted through the formularisation of theories on identifiable trends and patterns. Interpretation means to place findings and results in theoretical frameworks. The aim of this study was to integrate the responses of the literature study, observations and interviews into a meaningful whole and to deliver general explanations that answer the research question.

3.5 Quality assurance: data verification

Since this was a qualitative study, it was essential that the data should be verified. This would make the research more valid, especially in a scientific community (Maree & Van der Westhuizen, 2009:28).

According to Maree (2007:38), a wide range of strategies are required to enhance the validity of qualitative results, but not all researchers agree on the specific quality assurance techniques that can be applied. Thus, the techniques that are chosen should be suitable for the individual research study.

My primary concern was that of an overall triangulation in order to increase the validity of data through the convergence, corroboration and correspondence of findings from a variety of data collection resources (Creswell & Plano Clark, 2009:63).

In addition, Merriam classifies six strategies to guarantee validity in qualitative research (Maree, 2007:38):

- Crystallisation
- Member checks
- Long-term observation
- Peer examination
- Collaborative research
- Clearing researcher bias

I used all of the strategies to a lesser or larger extent and in some form of combination. The application of these terms is discussed under the following subheadings.

3.5.1 Crystallisation

According to Merriam, crystallisation is different findings compared to one another. The findings include investigations, sources and methods (Maree, 2007:38). In this study, as indicated in the previous paragraph, I used a continued interactive method of data collection, processing, analysis and reporting. This allowed me to go back to the original field notes, my reflective journal and participants to verify or collect additional data. I compared the literature study, observations and interviews to validate the data and enhance the trustworthiness.

Varied influences, especially those that differed from my own, were used to find multiple constructed realities, as suggested by Lincoln and Guba (Maree, 2007:40).

3.5.2 Peer examination and member checks

Merriam describes peer examination as seeking the opinions of colleagues (Maree, 2007:38). Although my peers were not involved in the research as such, their role as assessors of the students' work became much more than isolated incidents. My colleagues were also lecturing the same groups of students and their subsequent interest in the research was inevitable. Our continued interaction regarding the assessment of students' work resulted in an on-going informal interaction beyond the formal responses to the students' progress. This increased the trustworthiness of the research process and the data.

In addition, the high level of interaction between the students and me during and outside the classrooms, in an informal way, inevitably added to corroboration of the data collected through the semi-structured interviews with selected students. Additional corroboration was possible when these students responded formally to the observations that were recorded in my reflective journal.

3.5.3 Collaborative research and long-term observation

As recommended by Merriam (Maree, 2007:38), the participants were involved in the research as both collaborators and as subjects. Although collaboration in the research was not initially formally planned, the role of colleagues as assessors of the students' products as well as being their educators, evolved into all the participants becoming a community of practice and subsequently and effectively collaborators in the research. This continually grew throughout the cycles of the action research and has reached an apex during cycle 3 as detailed in the description of that cycle.

Although this research did not reach a long-term extent of a long period of intermittent times, this could be regarded as a long-term observation more in

terms of an extended period of continued daily observation over a period of at least sixteen weeks of collaboration.

3.5.4 Clearing researcher bias – a community of graphic design education researchers

Researcher bias was cleared as far as it is possible through the clarification of all my assumptions, views and theoretical orientations (Maree, 2007:38). In this research it was crucially important to maintain a very practical bias. This was accomplished by having my colleagues assess the students' graphic design products. Even though students might, therefore, have experienced new processes, their products could not be compromised and through this strategy such compromise was averted.

Including all six suggested data verification strategies to a lesser or larger extent and in the best suitable combinations when and where possible, turned out to have a major advantage for quality assurance in this research. This process effectively created a cohesive community of graphic design education practitioners. With this community's shared vision of improving the graphic design profession efficiently through education, it also effectively became a community of graphic design "researchers". The inadvertent proximity, inextricable contact in the academic setting and their subsequent continued formal and informal interaction, effectively collecting, sharing, providing and checking data, accomplished this fete between the participants.

3.6 Possible contributions of the study

The strategic outcome of this study will be the implementation of various educational practices in order to ensure that graphic design students acquire the human qualities that are essential for a career that enhances quality of

life. I will use these educational practices in educating graphic design students on a day-to-day basis.

The outcomes of the study will also be published in an accredited journal. This may assist others in the field of graphic design education.

3.7 The role of the researcher

In this study I was in partnership with the participants, as well as a sensitive observer, as explained by McMillan and Schumacher (Maree, 2007:41). This partnership enabled an understanding of the data whilst it was collected and analysed, this created the potential that from observation additional questions may raise that would intensify the study (Maree, 2007:41).

In this study I:

- Combined a comprehensive literature study into a compact written format;
- Was a participant who acted as an observer;
- Compiled and managed all the observations;
- Prepared, structured and conducted interviews, as suggested by Joubert (Maree, 2007:41);
- Analysed and crystallised the data, as suggested by Joubert (Maree, 2007:41); and
- Combined all the information into a sensible research report and a publishable article.

3.8 Ethical considerations

As noted by Whitehead & McNiff, (2006:77), “[d]emonstrating ethical behaviour is when people commit to respecting themselves and one another, and not to do harm. This is especially important in educational action research, where the aim is to generate and test new knowledge about educational practices and theory that will inform new developments in the field. It calls for a high moral awareness throughout, and an agreed framework of conduct”.

Audio-visual recordings at an institution plagued with sporadic and unexpected, volatile and, more often than not, violent socio-economic and academic-political upheavals of various scopes and intensities through which any individual could be recognised has become a very sensitive issue at Tshwane University of Technology even if anonymity could be achieved – which is technically difficult, labour intensive, and eventually, if it was to be sufficient, way beyond the cost effectiveness within a budget that could be justified in the context of this research. Even in a secluded classroom environment and for academic purposes, most students view such audio-visual recordings with severe suspicion. If such recordings may be related to the possible exposition of students’ creative capital and, even more critically, if exhibition of their products and an associated assessment thereof is a possibility, most students refuse to be subject to any possible exposure of that kind. Even if some students would be willing to be submitted to these circumstances and others not, peer pressure overwhelms all other considerations and forbids the possibility of any kind of such discriminatory action.

This situation was unfortunate because visual evidence of classroom interaction and behaviour as well as graphic design products had to be excluded from the data. Although visual evidence would have been ideal, I had compensated for its absence by utilising as many as possible ethically acceptable data collection options: I had the continual interaction of the

entire community of graphic design practice at the Tshwane University of Technology in a continual interaction with each other at my disposal. With its multitude of eyes, ears and mouths and through its formal and informal feedback of their experiences – as well as my own participatory actions – I attempted to construct an appropriate and sufficient comprehensive holistic image (physically, visually, auditory, mentally, emotionally and even spiritually) of individual and communal experiences of the acquisition of essential human qualities for a contemporary career in graphic design through which the quality of life for all will be enhanced.

Audio-recordings for interviews were the most appropriate in view of the ethical demands of this study. However, audio-recordings during lectures where there is continual (“uncontrolled” and often rowdy) interaction and activity potentially between all participants, as was also expected in this research, is eventually according to my experience not of much value because audibility of individual speech is difficult to recognise.

Besides the maintenance of anonymity, the following ethical rights of the participants were respected in the study (Bless & Higson-Smith, 1995:102-103):

- The participation in this research was voluntary and the privacy of the participants was respected.
- Anonymity was ensured through individual audio-recordings only. All identifiable information of the recordings was treated confidentially.
- As the researcher, I did not impose the research problem upon the participants.
- The study was directly action related, focusing on a specific problem.

- I ensured that all the parties collaborated in a meaningful way, especially in the planning and decision making of each session.
- I ensured that the results of the study would be available to all the participants.
- I also attempted to resolve the research problem based on the findings.

3.9 Delimiters of the research

The proposed delimiters of the study based on the general framework provided by Patton, Swanson and Holton (Maree & Van der Westhuizen, 2009:38-39) are provided in Table 3.2:

Potentially limiting issue	Delimiter
Naturalistic enquiry	Only graphic design students and lecturers from Tshwane University of Technology were used in this study. Only a limited number of lecturers in graphic design were used in this study. Only a limited number of professional graphic designers were used in this study.
Inductive analysis	Only one person performed the data collection and analysis.
Holistic perspective	Since human beings were involved in the research, the “Hawthorne effect” had to be considered, because it can influence class dynamics and learning dynamics.
Qualitative data	Detailed descriptions are made possible by means of qualitative data collection methods; however, an individual performed this task.
Personal contact and insight	The findings may be criticised in terms of the Hawthorne effect and personal bias.
Dynamic systems	There were continuous changes in the classes being investigated, due to newcomers and students leaving the course.
Unique case orientation and context sensitivity	The context was focused only on self-directed learning. Environmental influences and differences that could affect behaviour were not necessarily known.

Empathetic neutrality	Observation may be strange to individuals and/or classes and thus could have influenced behaviour.
Design flexibility	Structural research requirements could have influenced the nature of the flexibility associated with this study.

Table 3.2: Proposed delimiters of the research

I used the above list of proposed delimiters as a constant checklist of possible shortcomings and weaknesses in order to try to overcome them where possible. It also served as a measurement of validity in the research.

An example of some delimiters that were submitted to such constant check was the limited number of lecturers in graphic design and professional graphic designers that were included in this research. A larger number of each of these cohorts may have exposed a more comprehensive image of graphic design education in scope. However, this research does not have its focus on scope or quantity, but on the best possible quality of graphic design education practice in order to ensure the acquisition of essential human qualities for a contemporary graphic design career.

However, I have been a professional graphic designer for 16 years and I am still in contact with the national and international industry and many of my previous colleagues who have become my severest critics regarding my contribution to graphic design education. In addition, national and international graphic design education congresses and conferences are another checkpoint source through which I could gauge the trustworthiness of the responses of the limited sample of graphic design lecturers.

Apart from these boundaries there also were possible additional limitations and challenges that could hinder the validity of the study. These, as well as possible solutions, are discussed in par. 3.10.

3.10 Possible additional limitations and challenges with proposed solutions

Possible limitations and challenges	Possible solutions
Students may not attend the classes.	Let them know well in advance and explain to them why they had to attend those specific classes.
Students may not take the interviews seriously.	The nature of the research was explained to them in detail. This created an awareness of the advantages of the study for themselves.
The way classes are presented may be biased if only one person is involved.	Other lecturers were asked to assist in the activities in classes in order to control the validity of the study.
Cultural differences.	Interviews and observations were planned carefully in order to prevent problems relating to cultural differences.

Table 3.3: Possible limitations and challenges of the research

3.11 Recapitulation of comments

Chapter 3 describes the research design, with specific emphasis on the research methodology, population, sample and data collection techniques. Attention was also given to the interpretation and verification of the data, as well as the limitations and challenges of the research.

Chapter 4 covers the empirical study.

chapter 4

Empirical Study

4.1 Introduction

As indicated in the preceding chapters, this research required a qualitative research paradigm and, because it focused on the improvement of my educational practices in second- and third-year graphic design classes at the institution where I am employed, the most preferred and appropriate methodology was that of participatory action research. My dual role of lecturer to second- and third-year graphic design students and researcher therefore was of crucial importance. Fortunately, the two roles in this research were complementary in the sense that, as lecturer, my natural propensity is to deliver quality in my educational practices and, as researcher, my particular focus was on accomplishing this aim – obviously in conscious recognition of and distinction between these two roles in order for both to be optimally executed so as to ensure the best possible research result.

Unfortunately, at the time I needed to begin my field work, unexpected personal circumstances reduced the available time for completing my research by almost half. Although this required small adjustments, this research, focused on quality and not quantity as is indicated in the pages that follow. These adjustments, fortunately, did not jeopardise the integrity, nor have an adverse effect on the assertions of the research.

This chapter focuses on the action intervention of the research, which is in the form of required action research cycles. Each cycle consisted of the following action research steps:

Action research steps in each action research cycle

- **Identify:** The identification of my education practice that requires improvement and/or innovation. (Within a number of action research cycles, this identification may arise from the reviewing step of the previous cycle).
- **Plan:** Planning how to investigate the research challenge.
- **Action:** Executing the plan of the investigation.
- **Observe:** Recording and reporting of data obtained.
- **Reflect:** Analysis of data collected.
- **Review:** Determining that an action intervention is necessary for the increased improvement and/or innovation of my education practice.

4.2 Cycle 1: Exploring the current graphic design education and professional landscape

My problem, as revealed in Chapter 1, was the fact that I prepare students to become graphic designers by teaching theoretical knowledge of graphic design and the corresponding technical and physical skills. Through my literature review, I realised the fundamental truism by Barnett (2007:7) that acquiring knowledge and skills in a super-complex world with an unknown future “cannot begin to offer us a sufficient set of ideas for a higher education

in the twenty-first century. At best ... they [knowledge and skills] offer just two pillars of an educational project. By themselves, these two pillars, which we may label the epistemological and practical pillars, will topple over: they need (at least) a third pillar – the ontological pillar – to ensure any kind of stable structure”. I realised, therefore, that the pedagogical being of the student has to be the centre of my educational thinking, as Barnett (2007:102) notes: knowledge can be forgotten and skills can atrophy without use; but dispositions and qualities are durable in their nature. They constitute the student’s pedagogical being. It is they that have to be the focus of “teaching” in higher education. In addition, as noted, the student of the twenty-first century is also a new generation of student: A digital native living in a post-modern era within a globalised, super-complex world with an unknown future. This new generation student, in particular the graphic design student, has a vital responsibility towards their personal and professional development because of the public exhibition of their products in virtually every possible domain or area in life. Gardner (2006:x), in proposing his “Five minds for the future”, says the primary consideration in education has become “what kind of human beings we want to be and what kind of world we want to live in”. Barnett (2007:3) is adamant that such a philosophical perspective “is crucial to getting to grips with what it is to be a student in the contemporary world, and with the kinds of human being that are appropriate, indeed, called for, in a contemporary world that is full of perplexity”. Additionally, for Gardner (2006:141-151), what is called for are people with moral and ethical character whose purpose is to do the good work of creating the best possible quality of world for all to live in. There is, no doubt, “a pressing case for such critical utopianism” (Barnett, 2007:4), which has become the purpose of education and the challenge of the professional graphic designer.

Due to this, it is important to explore the current graphic design education and professional practice landscape to ascertain whether the required pedagogical being of the graphic design student will ensue in a professional graphic design practice that will enhance quality of life and of society at large.

The following activities were implemented to explore the current graphic design education and professional practice landscape:

Cycle 1: Action research steps

- **Identify:** Exploring the current graphic design education and professional practice landscape.
- **Plan:** Interviews with students in graphic design, graphic design lecturers and professional graphic designers.
- **Action:** Execution of interviews.
- **Observe:** Recording and reporting of interview data.
- **Reflect:** Analysis of data collected through interviews.
- **Review:** According to the reflection on the data collected through the interviews, what kind of intervention would cause the improvement of my educational practices so that my graphic design students will be challenged to acquire the human qualities that are essential for a career that enhances the quality of life?

Only the significant steps in this cycle or the significant parts thereof will be highlighted in the text.

4.2.1 Identify

The driving force of this study was to answer the main research question, which, as stated, is how can I ensure that my educational practices will

challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

However, in order to answer this primary research question, as well as its subsidiary questions, the current graphic design education and professional practice landscape had to be explored to establish baseline data from which the research can commence.

4.2.2 Plan

In order to obtain the required baseline data, semi-structured interviews were conducted (Leedy & Ormrod, 2001:159) with graphic design students, graphic design lecturers and professional graphic designers.

Two components were identified through which the graphic design education and professional practice could be explored. The first component is to explore the current educational perspective and how it contributes to the acquisition of the essential human qualities a graphic designer needs. The second component should reveal the nature of the essential qualities a graphic designer needs to acquire. The following questions were compiled, with questions a, b, and c exploring the first component and questions d, e and f the second component:

- a. What different teaching methods have you experienced in your graphic design course and identify those that were the most prevalent?
- b. Which of these teaching methods did you prefer and why?
- c. How well do you feel you were being prepared to enter a career in graphic design?
- d. How would you describe the ideal world that you would want to live in?

- e. What would you say your role is as a graphic designer in creating such an ideal world?
- f. What would you say are the essential qualities a graphic designer needs to possess to achieve such an ideal world?

The questions were adjusted to fit each of the three particular groups of interviewees during the time of the interviews.

For each of the three groups of interviewees (graphic design students, graphic design lecturers and professional graphic designers), the purpose of the research was explicated, an invitation to voluntary participation was extended, anonymity and all other ethical requirements were established and participation secured with letters of consent where necessary.

Appropriate arrangements were made with each individual in each group of participants for the interview at the same, most convenient quiet venue where interruptions were unlikely.

4.2.3 Action

The planned interviews were conducted.

4.2.4 Observe

The recording and reporting of data was a simple matter that did not require the intensive complexity of coding normally associated with data that is obtained from semi-structured interviews. The reason is that, although comprehensive descriptions were expected as responses from participants, most questions were answered with a one-word answer or a short phrase, with a minority of longer phrases and a short narrative as a rare exception. At

first this was a concern, but the reason for this phenomenon became clear after reflection. Firstly, most questions simply required only a one-word or a short phrase answer. Secondly, it is very unlikely that the students would know the accurate terminology for the response to the questions related to the teaching methods. Thirdly, although the student sample was cosmopolitan in compilation, for most of them, English is their second and indeed for many even a third or fourth language. This means that their confidence in expressing themselves was hindered by the possible exposure of their deficient language proficiency impeded elaborated responses even when prompted.

The unit of data recording was, therefore, one-word or equivalent descriptive short phrases with the exception of longer phrases and/or a short narrative when its contribution was significant. Significant and distinguishable short phrases that rendered an appropriate response to the corresponding question were identified and “coded”. Similarly, short phrases from different students have been adjusted to the closest format of the most recognisable and comprehensible everyday language. The frequency of appearance of the same responses to each question was collated and the different responses arranged from the highest to the lowest frequency of appearance in the table of data that follows. The exception is question c that required any appropriate qualitative evaluation indication of the perceived preparedness of a participant for a career in graphic design.

The recorded data is contained in Appendix D.

4.2.5 Reflect

This section focuses on the analysis of the data collected through the interviews in the table 4.1.

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>1. Dominant teaching methods</p> <p>A wide variety of teaching methods were indicated. On the one hand this may be interpreted as good, because of the apparent diversity that is indicated in teaching graphic design students. On the other hand, this may indicate an eclectic approach to graphic design education, with a lack of focus on the core business of graphic design education. In view of the data, the latter seems to be more likely.</p> <p>Although a wide variety of teaching methods were mentioned, it was found that teaching with the help of visual aids was the most dominant teaching method. PowerPoint presentations seemed to be most prevalent, followed by consultations and/or lecturer interactions together with theoretical input.</p>	<p>It was found that PowerPoint presentations, preferably with student participation, were the most dominant current teaching method in the graphic design programme.</p>	<p>The more experienced professional graphic designers were convinced that there had been an enormous improvement in teaching methods over the past 15 years. It also was evident that a wide variety of teaching methods were currently in use in the graphic design programmes, and PowerPoint presentations were dominant with their visual impact and accessibility.</p>
<p>In conclusion:</p> <p>The current most dominant teaching methods in graphic design were teaching with the help of visual aids and PowerPoint presentations.</p> <p>I had to determine whether the teaching interventions identified in this cycle would give rise to an improvement in my educational practice to challenge graphic design students to acquire the human qualities that are essential if their careers are to enhance quality of life.</p> <p>Even though the dominant teaching methods have been identified, these may not challenge the students to acquire the human qualities that are essential for a professional graphic designer, because they are primarily lecturer centred in their transmission mode and not learning centred (Slabbert, De Kock & Hattingh, 2009:137).</p>		

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>2. Preferred teaching methods</p> <p>Most of the students preferred class consultations and/or lecturer interactions. This teaching method, however, was the third most dominant method used in the graphic design programme. The second most preferred teaching method was PowerPoint presentations, which was also the second most dominant teaching method. The third place was shared by two teaching methods, namely teaching with the help of visual aids and experimentation and/or the freedom to explore. Teaching with the help of visual aids was the most dominant teaching method used in the graphic design programme, and experimentation occupied fourth place. Practical demonstrations as well as constructive criticism sessions were the fourth most preferred teaching methods. These latter methods are in use in the graphic design programme, but are not very dominant.</p>	<p>According to the transcriptions of these interviews, only two lecturers preferred PowerPoint presentations, even though it was found to be the second most dominant teaching method according to students. One might wonder why some lecturers use PowerPoint presentations if it is not necessary their preferred method. The answer may be found in some of the reasons given as to why PowerPoint presentations were preferred, namely “quick and easy”, “it links up with the language and/or frame of thinking of most students” and “it improves understanding”. Another comment may clarify this apparent anomaly, namely the fact that some lecturers were willing to adjust their teaching to be more effective, even though it was not their preferred teaching method.</p>	<p>The professional graphic designers with more than 15 years of experience wanted teaching to be more relevant, structured and by means of visual aids. On the other hand, the professional graphic designers with only two years’ experience wanted more freedom with self-discovery and exploration.</p> <p>It is interesting to note how the opinions varied according to the experience of the graphic designers. This emphasises the statement by Slabbert, De Kock and Hattingh, (2009:19) that the youth of today are fundamentally different from previous generations and that this will have a profound impact on education.</p>
<p>In conclusion:</p>		
<p>There were agreements with regards to the preferred teaching methods; however, there were also disagreements in the views concerning preferred teaching methods between students in graphic design, lecturers in graphic design and the graphic design industry. The biggest disagreements were by those in the industry.</p> <p>There is, therefore, a discrepancy – although not extremely large – between the most dominant and the most preferred teaching methods. Although the preferred teaching methods were more encouraging regarding a dominance of transactional modes, initiating and maintaining learning in the proposed teaching methods remained primarily teacher initiated and controlled (Slabbert, De Kock & Hattingh, 2009:137).</p>		

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>3. Preparedness for career</p> <p>The majority of the students, regardless of their year of study, felt that they were well prepared to enter a career in graphic design, although a small percentage felt that there were some inadequacies. There also were a few students who felt that they were not being prepared at all to enter a career in graphic design. The main reason for this response was the fact that they needed more skills, motivation and encouragement.</p>	<p>Most of the graphic design lecturers believed that their teaching was effective to prepare their students for the industry. It was also evident that the lecturers, regardless of the year and subject taught, made an effort in preparing students for the industry. However, I found that lecturers presenting real-life projects to students felt more confident in their results of preparing graphic design students for a career in graphic design.</p>	<p>Only one of the five professional graphic designers, the one with two years' experience, felt that he was prepared for the industry.</p>
<p>In conclusion:</p>		
<p>According to the observation and reflection on my data, most of the students and lecturers in graphic design believed that the current teaching methods in the graphic design course prepared students effectively for the industry. However, most professional graphic designers did not feel prepared when they entered a career in graphic design.</p> <p>The differences in these findings can be substantiated with the following examples:</p> <p>One lecturer stated in the interview that she gave real-life challenges, thus teaching students more than just skills. She revealed the effectiveness of this teaching approach by stating, "previous students came back to tell me that they only realised, once they started to work, how valuable my teaching actually was".</p> <p>One of the professional graphic designers stated, "I did not even know the fundamental principles of design when I finished my studies".</p> <p>This discovery made it clear that my educational practices would need some adjustments in order to ensure their effectiveness, especially if I would like to enhance quality of life through these teaching methods.</p> <p>Even if perceptions are that students are prepared or well prepared for their careers as graphic designers, research has shown that the dropout rate of students in tertiary education institutions is disturbingly high. In addition, many researchers have indicated that graduates find it difficult to find and keep an job (Dryden & Vos, 1999:33). What is more disturbing is that graduates who enter the workplace do not possess the required basic skills and qualities like integrity, reliability, responsibility, work ethic, communication, management of time, inter-personal relationships, problem solving and lifelong learning, that have become the key requirements for employability (Griesel & Parker, 2009).</p>		

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>4. Ideal world</p> <p>The interview transcriptions revealed wide ranging descriptions of an ideal world, although these descriptions may be categorised into social desires and design desires. In the category of social desires, most students wanted peace, possibilities, opportunities and a contented world filled with positive energy.</p> <p>In the category of design desires, most students wanted better visual communication, passionate design, lots of creativity, colour and inspiring surroundings with innovation and no limitations.</p>	<p>The interviews revealed some descriptions of an ideal world and I noticed that they could be categorised into social desires and design desires. Only the most dominant characteristics will be mentioned.</p> <p>In the category of social desires, most of the lecturers in graphic design wanted peace, harmony, respect and contentment. If one focuses on the design desires, a world with quality and beautiful design was mentioned. Thus there is a close correlation between all the lecturers with regards to their ideal world.</p>	<p>Most of the professional graphic designers wanted peace, harmony, respect and contentment in their ideal world.</p>
<p>In conclusion:</p> <p>It is clear that most of the people involved in this study desired a peaceful, respectful, harmonious and contented world.</p> <p>It is also evident that the different groups of this study, namely the students in graphic design and the professional graphic designers, desired more or less the same kind of ideal world. However, I did notice that the students and lecturers in graphic design mentioned social as well as design desires, whereas the professional graphic designers only mentioned social desires. This highlights the importance of the social responsibility of a graphic designer and therefore the next section will focus on how this ideal world can be created.</p> <p>These are certainly noble desires. What everyone should become acutely aware of is that they need to create the world that <i>they</i> want to live in.</p>		

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>5. Role</p> <p>This specific interview question alerted some students to the fact that they could use their graphic design skills to create a better world, and most of them also realised that this called for greater responsibility.</p> <p>Most of the students said that they could create an ideal world by effectively delivering a positive message through their graphic design skills. They stated that they had to be creative, work hard and improve themselves in order to ensure the effectiveness of this communication.</p>	<p>It was evident from the interviews that most of the graphic design lecturers felt that they had some responsibility in making students aware of their responsibility to create an ideal world. According to them, students need to realise the impact they have on society in order to be more responsible graphic designers.</p> <p>Further, some lecturers stated that they needed to do more than just teach graphic design students the technical skills in order to prepare them to be responsible graphic designers. According to them, it was also their responsibility to counsel students in other areas of their lives when needed.</p>	<p>All the professional graphic designers were very aware of their position in society, as well as of their responsibility. They indicated that they could communicate a positive message to society through their graphic design skills, as well as influence society by creating design solutions for social problems.</p>
<p>In conclusion:</p> <p>Some of the graphic design students were not aware of the fact that they could use their graphic design skills to create a better world, and most of them only realised during the interviews that this called for greater responsibility. However, all the lecturers in graphic design felt that it was their responsibility to make the students aware of their responsibility as graphic designers. If this is the case, why were some students confronted with this responsibility for the first time in the interviews? The lecturers believed that they were making students aware of their responsibility towards society, but not all students were aware of this responsibility. Thus, there might be a deficiency in the communication or educational practices between lecturers and students.</p> <p>The importance of the above-mentioned responsibility is also evident as all the professional graphic designers were motivated by this responsibility. This responsibility, according to all the participants, requires certain qualities.</p> <p>It is crucial to realise that students will not be able to fulfil their role in creating the world that they want to live in unless they cultivate the five minds of the future, namely the disciplined mind, the synthesising mind, the creating mind, the respectful mind and the ethical mind (Gardner, 2008).</p>		

Responses from graphic design students	Responses from graphic design lecturers	Responses from professional graphic designers
<p>6. Essential qualities</p> <p>Although a wide range of essential qualities of a graphic designer were revealed, most of the students stated that creativity, hard work, passion and effective communication were essential qualities needed by graphic designers.</p>	<p>Again, a wide range of essential qualities a graphic designer should possess were revealed. Most of the lecturers in graphic design stated that creativity, strength, logic, nobility and the ability to handle criticism were essential qualities for a graphic designer.</p>	<p>Most of the professional graphic designers stated that passion, hard work, creativity, courage and determination were essential qualities for a graphic designer.</p>
<p>In conclusion:</p> <p>Unless the essential, or fundamental, human qualities to be acquired by a graphic designer are clearly identified and cultivated, we may engage in a futile, self-destructive graphic design educational practice, leading to similar graphic design professional practice (Barnett, 2007:101-102).</p> <p>All the participants agreed that graphic designers need certain qualities. Amongst others, these were identified as hard work, passion and the ability to communicate effectively with people. However, creativity was identified as by far the most important quality a graphic designer needs. According to Newark (2002:14), a graphic designer needs creativity to create something novel, innovative and aesthetic. Thus, creativity can be seen as an artistic quality that incorporates a wide range of other minor qualities. In view of the utopian perspective of this research with reference to an ideal world, creativity is imperative in creating such a world and to ensure employability, as indicated in Chapter 2.</p> <p>Although there may be other human qualities that are essential for a professional graphic designer to acquire, in order to fulfil a life enhancing society at large and to ensure employability, the immediate focus should be on the acquisition of creativity as the overarching artistic quality, which incorporates many other minor artistic qualities.</p>		

Table 4.1. Analysis of the data obtained from the semi-structured interviews with graphic design students, lecturers and professional graphic designers

4.2.6 Review

This first research cycle has revealed a range of qualities that a graphic designer might need to attain to ensure employability and to accomplish the creation of a life enhancing society at large. However, from the research findings of this first cycle, creativity may be regarded as the essential artistic quality that should be gained and cultivated by a professional graphic designer. Although this is not a surprising outcome, the research has made it significantly pronounced.

However, what remains inconclusive up to this point is how best to acquire this quality of creativity. Although many teaching methods for graphic design education have been identified and some even preferred, they seem to have deficiencies and subsequently do not convince as being the best to employ in order to ensure the acquisition of the essential artistic quality of creativity.

As noted, this first cycle of the research has revealed that the quality of creativity has to be acquired. Although creativity was discussed in Chapter 2, there may be a need for an additional exploration to expose the nature and structure of creativity as the essential artistic quality much required by graphic designers.

Therefore, it is necessary to identify and explore how best to attain this essential quality.

These two matters demanded a second action research cycle.

4.3 **Cycle 2: Improving my educational practices to ensure the acquisition of the essential artistic quality of creativity**

The review of the data obtained in the first cycle of the action intervention highlighted some shortcomings in current graphic design education and

professional practices. The importance of a graphic designer being an artist were also evident and could best be described as an artistic quality. Creativity was identified as the most prominent artistic quality, therefore the essential artistic quality of creativity had to be the focus in graphic design education.

At the same time, it has become obvious that a wide range of educational practices are employed in graphic design education that may likely not be the best educational practices for graphic design students to ensure they gain the essential artistic quality of creativity.

These findings led to the second cycle of the action intervention. In this cycle I intended to improve my educational practices in order to ensure the acquisition of the essential artistic quality of creativity. This will establish a professional graphic design practice, which will enhance quality of life and ensure employability of the graphic designer. The following steps were followed in this cycle:

Cycle 2: Action research steps

- **Identify:** Improve my educational practices in order to challenge graphic design students to acquire the essential artistic quality of creativity.
- **Plan:** Design challenging, real-life learning tasks that demand the execution and expression of the artistic quality of creativity by graphic design students and facilitate a learning process that ensures the highest possible learning quality. Through a process of facilitating learning, the process would demand the acquisition of the artistic quality of creativity within a facilitating learning context.
- **Action:** Present challenging real-life graphic design learning tasks.

- **Observe:** This step concerns the observation of the learning task execution by the learners and my competence in facilitating that learning process.
- **Reflect:** Reflect on the data collected through the process of observing the learners execution of the learning task, and reflect on my competence in facilitating that learning process.
- **Review:** Regarding the facilitating learning process, the data recorded in the reflective journal, and the interviews, what kind of intervention would be necessary to improve my educational practices in such a way that my graphic design students will be challenged to acquire other human qualities that are essential for a career that enhances quality of life?

In this cycle and every cycle that follows, a semi-structured interview with the same six questions that have been asked during the first cycle with a purposive sample of 5 second- and 5 third-year students was repeated as an additional measure of crystallisation. Since these interviews were not essential to this research, their results for each cycle are captured in Appendix E, F, G and H. However, some significant aspects related to the research did appear and they are highlighted in the “Review” and “Reflect” steps of the cycle in which they featured.

4.3.1 Identify

According to the first cycle in the action intervention and the literature review, two aspects needed attention in this second cycle. A wide variety of essential qualities have been identified, of which a particular set could be categorised as artistic. These included, among others: creativity, attention to detail, curiousness, exploration, good design, expression of ideas, general knowledge of design, innovation, inspiration, neatness, observation, open-

mindedness, originality, practise, self-expression, skills, talent, technical skills, understanding of design, uniqueness and visual alertness. Although some of these may rather be artistic methods or techniques or requirements, all of them are closely associated with the artistic nature of the graphic design product and the quality thereof. However, some of them clearly refer to qualities of the graphic designer. As noted, the quality mentioned most frequently and regarded as the most important by all the participants in this research was that of creativity, and this concurred with the literature findings as discussed in Chapter 2.

Besides the qualities mentioned above, it is important to explore the key qualities that characterise creativity (De Pauw, Venter, Warmoes & Neethling, 2010):

- Fluency:
Generating a multitude of ideas.
- Originality:
Ideas that are new, fresh, novel, first, surprising, unusual, etc.
- Elaboration:
Continuously extending any one particular idea.
- Flexibility:
Moving quickly and easily from one idea to another.
- Resistance to premature closure:
Keep on keeping on generating new ideas.
- Versatility:
Doing many things well.

These key qualities are vital and, although there are techniques that might assist in acquiring these qualities, they cannot be taught. In fact, we are awakened by this famous quote from Oscar Wilde: “An admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught” (Wilde, S.a.).

Creativity has become synonymous with graphic design. But far more significantly, “[i]n our global, wired society, creativity is sought after, cultivated, praised. Corporate visionary John Seely Brown has quipped that in the world of tomorrow, people will say, ‘I create; therefore I am’” (Gardner, 2006:77). In this research, I adopt the notion of a much larger and encompassing perception of creativity than a set of methods, techniques, strategies and the like – as mentioned earlier in this section. I agree with the conception of creativity as one of the five minds for the future – which is distinctively human – according to Gardner (2006:77-102). He says the following about creativity, which, to me, represents and includes everything associated with the essential artistic quality of a graphic designer: “The creator stands out in terms of temperament, personality and stance. She is perennially dissatisfied with current work, current standards, current questions, current answers. She strikes out in unfamiliar directions and enjoys – or at least accepts – being different from the pack. When an anomaly arises ... she does not shrink from that unexpected wrinkle: indeed, she wants to understand it and to determine whether it constitutes a trivial error, an unpredictable fluke, or an important but hitherto unknown truth. She is tough skinned and robust. There is a reason why so many famous creators hated or dropped out of school – they did not like marching to someone else’s tune ... All of us fail, and – because they are bold and ambitious – creators fail the most frequently and, often, the most dramatically. Only a person who is willing to pick herself up and ‘try and try again’ is likely to forge creative achievements” (Gardner, 2006:83).

It is all about character. “In any event,” says Gardner (2006:167), “the survival and thriving of our species will depend on our nurturing of potentials that are distinctly human.”

Having identified creativity as the encompassing, essential artistic quality that should be acquired, it ought to be obvious that the most efficient and appropriate educational practices “likely to forge creative achievements” have to be employed to accomplish that. From the preceding paragraphs it is obvious that this educational practice will need to be significantly different from my traditional educational practices. My exploration in search of education practices that are aligned with quality of life and the nurturing of potential led me to authentic learning and its associated education practice of facilitated learning, described in par. 2.10.

Having identified the essential artistic quality of creativity that students need to acquire, as well as the corresponding education practice of facilitating learning that I will employ, I could then engage in planning how I would go about engaging in this action research cycle.

4.3.2 Plan

In this cycle and every cycle that follows I planned to do the following:

I would use the professional education practice of facilitating learning as described in par. 2.10 in order to ensure that my graphic design students acquire each of the identified the human qualities that are essential for a graphic design career that enhances quality of life. With each subsequent cycle, I would improve my facilitating learning education practice in general and also in relation to the educational challenges that each of the newly identified essential human qualities to be acquired, will demand.

All the second- and third-year students in the subjects General Drawing II and III and Illustration II and III would participate in four groups according to the subject and corresponding year group.

All the lecturers at the Tshwane University of Technology in their capacities as described in the research design would also participate.

As facilitator of learning within the context of professional facilitating learning practice, I had to design a challenging real-life graphic design learning task (LTD) according to all its demanding requirements for each of the four groups of participating students corresponding with the subject and year of study and the acquisition, execution and expression of the particular essential human quality that was to be acquired. I needed to present the learning task (LTP) appropriately to the learners. The learning task design (LTD) and learning task presentation (LTP) were the only facilitating learning functions that the facilitator of learning could plan and determine in advance. All the other facilitating learning functions are determined by the learner to which the facilitator of learning had to respond most appropriately. After learning task presentation, the learners needed to engage in learning task execution (LTE) through authentic learning (AL). They should have done this initially through metalearning (ML), and subsequently through co-operative learning. During their learning task execution, I, as facilitator of learning, needed to provide the most efficient and appropriate feedback (LTF) to them on their learning task execution during their metalearning as well as their co-operative learning, with the aim of increasing the quality of their learning. At the end of each learning period (a particular class period), I needed to facilitate the process during which the students engaged in learning task consolidation (LTC). During this phase, they needed to determine the significance and quality of their learning progress up to that point, as well as what they needed to smoothly bridge the time gap between the current and the next learning period.

4.3.2.1 The learning task design

The following challenging real-life graphic design learning tasks were designed for the corresponding groups of students to acquire the essential artistic quality of creativity through engaging with, exploring, constructing, expressing and eventually attaining the quality in all its possible constituents.

a. General Drawing II (Documentary drawing)

Provide the marketing department of the University with a photograph of the most ordinary, bland and uninteresting location on campus, as well as your true-to-reality A3 pencil drawing documenting your most appealing and captivating representation of that location, which they will use on their marketing brochure of the physical campus. The drawing must be mounted on A2 black board.

b. Illustration II (Visual essay)

Create the most appealing and most appropriately accessible visual essay possible expressing the most important events that have shaped your life as it is today, so that we will be able to learn who you are and for us to subsequently build the most efficient community of practising graphic designers who will impact the world by producing an A3 illustration done in any medium - except computers - mounted on A2 black board.

c. General Drawing III (Product drawing)

Excite your peers in an unexpected way through twenty of your most appealing A5 pen-and-ink detailed individual drawings of a family of the most interesting and clearly distinguishable three-dimensional objects

with similar characteristics and visual qualities. This must be a ring-bound presentation.

d. Illustration III (Promotional item)

As graphic designer, one of the most important requirements for success in your career is that your work as illustrator will be identified unmistakably as yours wherever it appears. You now have the opportunity to obtain a head start in this regard amongst all aspiring graphic designers by creating your own unique, self-promotional item that will propel demand for your work way beyond those of your competitors. However, your self-promotional item has to challenge and entice your client to engage with its constituent parts in order to reveal its holistic surprise.

4.3.3 Action

The learning tasks were presented to the students verbally in order to create the most conducive learning environment. However, they were also given to the students in written format that prevented them from continuously asking what the real-life challenge was in its detail – it should also be clear that the formulation of the learning task is important and may be fairly complex to comprehend and remember in its detail by students simply listening to a once-off oral presentation thereof. The written presentation therefore serves as a continuous source and point of reference of what the challenge demands from the student.

The learning tasks were presented in the same way in the second- and third-year General Drawing classes, although the learning task presentation in the second- and third-year Illustration classes had some modifications. During the learning task presentation in the second- and third-year General Drawing

classes, the students were requested to read the learning task by themselves. In the second- and third-year Illustration classes I modified the learning task presentation. This modification was essential in order to make the challenge more “real”. I presented the learning task acting as a client. The students were encouraged to assume the role of a professional graphic designer.

4.3.4 Observe

This step in the action research cycle in this research contains the observation of the learners’ learning task execution through authentic learning, metalearning and co-operative learning, and my learning task feedback and consolidation as well as associated action research actions.

4.3.4.1 Learning task execution through authentic learning, metalearning and co-operative learning.

Over the years I had become aware that some students in some subjects have difficulty in executing their projects, primarily because of incompetence in planning their projects. According to Brews and Hunt (1999:903), planning is fundamental because of the strong relationship between planning and performance. In this regard, Slabbert, De Kock and Hattingh (2009:108-111; CD-ROM), suggest that learners initially use a question checklist through which they will be able to execute the metalearning strategy of planning their learning effectively. I decided to use such a “planning checklist” as a facilitating learning instrument that the students could use during the planning of their projects.

The planning checklist, as portrayed in Table 4.2, is adapted from Slabbert, De Kock and Hattingh (2009:CD-ROM) and consists of learning task factors as well as personal factors. The checklist focuses firstly on the learning task factors. These are subdivided into the topic, detail, task and representation.

The next set of questions focuses on personal factors. These are subdivided into learning style, learning approach and learning strategy.

PLANNING CHECKLIST		
Student Name:		
Project:		
Learning Task Factors		
Topic	What is the project about?	
	What do I already know about this project?	
	What must this project communicate?	
Detail	Do I know enough about what this project entails?	
	What are the most important aspects of this project?	
	How do these aspects relate to each other?	
	How does this relate to what I already know?	
	Does this make sense and, if not, what will I have to find out for it to make sense?	

Task	What am I required to do for this project?	
	What will I have to do in order to complete this project?	
Representation	How do I see this project?	
Personal Factors		
Learning style	How do I prefer doing this project?	
	Is this new to me?	
	How do I feel about doing this?	
Learning approach	What is my motive for doing this project?	
	What will I get from it?	
	How can I use the outcome of this project?	

	What if I don't do it?	
	How important is this project to me?	
	How do I need to change to do this most effectively?	
<i>Learning strategy</i>	How will I do this project?	
	What are the steps that I will follow to complete it?	
	Isn't there another way?	
	How difficult will this be?	
	How much time will it take?	
	What do I predict the outcome will be?	

Table 4.2: Planning checklist

I provided the students with this planning checklist after the learning task presentation.

During the next metalearning strategy, monitoring one's own learning, the students should concentrate on self-monitoring and/or cognitive responsibility. This is a vital aspect in learning, according to Garrison (1997). Thus, the students had to monitor their learning through metalearning with the help of a "monitor checklist" in order to maintain learning. This checklist is inspired by Slabbert, De Kock and Hattingh (2009:CD-ROM) and concentrates on new knowledge acquired throughout the project, the understanding of the project, as well as progress with and the intended completion of the project, as indicated in Table 4.3.

MONITOR CHECKLIST		
Student Name:		
Project:		
<i>New knowledge</i>	How does this new knowledge compare to what I previously knew or predicted?	
	Do I have to change my understanding of what I previously knew?	
<i>Understanding</i>	Do I understand what I am doing?	
	What will happen if I don't understand the project?	
	How does this relate to my understanding of other projects?	

	How could this be implemented in other projects?	
Progress	Is this the best way of doing this project?	
	How am I doing with the execution of the project?	
	Does this seem correct?	
	What should I do next?	
	Am I checking all possibilities?	
	Where will this lead me?	
	How do I feel about this?	
Completion	Have I completed this fully and carefully thus far?	
	What else needs to be done?	

Table 4.3: Monitor checklist

I provided this monitoring checklist for the students during the second class.

The next metalearning function is the assessment of one's own learning. This is a vital aspect of metalearning in order to maintain learning and to enhance the meaning thereof (Slabbert, De Kock & Hattingh, 2009:110). The assessment should be done with the help of an "assessment checklist", as adapted from Slabbert, De Kock and Hattingh (2009:CD-ROM). The checklist concentrates on the quality of the project as well as the future thereof as portrayed in Table 4.4.

ASSESSMENT CHECKLIST		
Student Name:		
Project:		
Quality	How could I have done this project even better?	
	Do I fully understand this and if not what will I have to do to fully understand?	
	Do I understand enough to justify stopping?	
	How does mine compare with others?	
	How do I feel about this?	

Future	How can I use this in the future?	
	What did I learn from this?	
	When will I need to do something similar?	
	How do I feel now?	

Table 4.4: Assessment checklist

I provided the students with this checklist during the last class.

The students completed the “planning checklist” in Table 4.2 in order to assist them with the planning of their learning. Most students complained about the length of the planning checklist.

In the next classes, the students had to complete a “monitor checklist”. They were more willing to complete the checklist on monitoring their learning than the previous planning checklist. Some students, however, struggled with this because they were still in the planning phase of their project and not ready for this phase.

In the second- and third-year General Drawing classes I noticed that most of the students were pleased with the progress of their projects. However, some of the third-year Illustration students discovered problems within their projects during this process.

In the following classes the students had to submit their final projects and had to assess their learning through an “assessment checklist”. According to my observation notes, most students enjoyed the assessment checklist, with one student explaining that “it helps to write things down that cannot be said”. However, the third-year Illustration students complained about all the “administrative work”.

According to my observations, most of the students were excited and honoured to hand their projects in. However, the second-year Illustration students would have liked more time for the learning task execution.

The third-year Illustration students had to present their finished learning tasks professionally. Most of the students presented their learning tasks proudly, according to my observations, but there were some who were not proud at all. These students had excuses for everything that went wrong in the design process. Most of them were also very nervous to present; some of them were even shaking while they presented.

The next aspect in this cycle of the research was the learning task feedback and learning task consolidation.

4.3.4.2 Learning task feedback and consolidation, as well as associated action research actions

As mentioned, learning task feedback is the most significant facilitating learning function to be executed by the facilitator of learning throughout the execution of the learning task by the students through authentic learning, metalearning and co-operative learning.

What is of crucial importance is to utilise those particular and specific questions that identify learning task feedback, which have to ensure the

acquisition of the essential quality of creativity of the highest possible level. Some of these are (Slabbert, De Kock & Hattingh, 2009:CD-ROM):

- “Have you thought of everything?”
- “Have you considered all possibilities?”
- “Is this the best way of doing it?”
- “How many more can you find?”
- “Do you understand what you are doing?”
- “Do you understand why you are doing it?”
- “Is this enough?”
- “How will you improve this?”
- “How sure are you?”
- “How will you make sure?”
- “How well do you think you did?”
- “What is the meaning of this for your future?”

Learning task feedback is essential and particularly so during the “planning one’s own learning” metalearning strategy in order to ensure that what the learning task requires is fully understood at that point in time in order to produce the highest possible learning quality in the completion of the learning task. The “planning checklist” assisted in this endeavour, although, as noted, most students complained about the length of the checklist. I also found during the learning task feedback that some of the third-year Illustration students had completed only parts of the “planning checklist”. Thus, this was not very successful. Overall, the students responded well during this interaction and I found that it forced them to think about their ideas and the execution thereof. However, some students were still waiting for me to give ideas and solutions, but most of them came up with their own solutions through this process.

Learning task feedback in the next set of classes focused on the “monitor checklist”, which assisted in the “mentoring one’s own learning”

metalearning strategy. This assisted the students in assessing their progress with the learning task itself to ensure the highest possible learning quality. Most of the students had reworked their ideas where necessary on a kind of continuous basis and I noticed that they were very happy with their progress.

In the second- and third-year General Drawing classes, this assessment was done through individual reporting in the classroom on the quality of learning. The second- and third-year Illustration students, however, did this reporting during individual meetings in my office in order to make the client/designer role-play more of a reality. This was done professionally as a meeting between client and professional graphic designer. The students took this task very seriously and acted as real professional graphic designers and my observation was that they enjoyed being in this position. They reacted positively towards the learning task feedback and most of the students discovered the shortcomings in their design solutions by themselves. This led to an improvement in their learning tasks. There were, however, some students who struggled with this process. One student expected me to give him the solution to his design problem. I asked him if he had considered all possibilities, to which he answered, "I guess not". I then encouraged him to see how many more design solutions he could find. He came to the next class with many solutions, as well as increased self-confidence. Another shortcoming that I noticed during the individual office situation was that the students missed input from their fellow students.

Learning task consolidation took place after each learning period. The students had to assess their rate of learning and the level of their learning quality. They were also confronted with a new challenge within their individual projects in order to continue to achieve the highest possible learning quality. For example, after the first learning period the students were encouraged to develop ideas and scamps as planned for during the planning of their learning. After the second learning period, during which the students monitored the progress of their learning, they were encouraged to

reconsider their ideas as well as their scamps in order to achieve the highest possible quality of learning in relation to the artistic quality of creativity.

At the end of this cycle the students had to submit their final projects for assessment. The students had to assess their learning. The “assessment checklist” assisted in this matter. My observations revealed that the students completed the “assessment checklist” in a positive manner and most of them were proud of their projects. The other lecturers in graphic design did the final assessment of the learning tasks, which represented the final learning task feedback and consolidation.

4.3.5 Reflect

This section focuses on the reflection of the data collected through my classroom observations, as recorded in a reflective journal, as well as the interviews held with graphic design students.

My reflections are grouped into the same functions of facilitating learning, except for the learning task design.

4.3.5.1 The learning task presentation

I observed that the presentation of the learning task was new to most of the students. I discovered that it was important to design the learning task and present it in such a way that students were challenged in order for quality learning to take place. However, I found that the learning task in the second-year General Drawing class was not challenging enough to ensure the highest possible quality of learning. This also led to some misunderstandings later in the project.

I found that the learning task in the third-year General Drawing class, as well as the presentation thereof, was challenging enough and this ensured active participation by the whole class.

As noted, in the second- and third-year Illustration classes I presented the learning task by means of role-play, acting as a client addressing professional graphic designers. The students appeared to enjoy these role-play scenarios.

I found that this role-play made the learning task more “real”, thus stimulating and challenging the students even more. It was evident that the students enjoyed the challenge.

4.3.5.2 The learning task execution through authentic learning, metalearning and co-operative learning

I constructed a planning checklist in order to assist students with the planning of their learning. I found that this checklist was not very effective due to its length. It was also evident that the students did not take the questions seriously enough because, according to them, it was too much effort.

In the third-year Illustration class the students completed only parts of the “planning checklist”. Thus, this was not very successful.

In the following class my reflections were on the students’ actions of self-monitoring and/or cognitive responsibility.

I found that the students were more willing to complete the “monitor checklist”. In the review of my observations I found that the students were starting to see the importance of these processes as a result of the improvement in their work process as well as the quality of their learning. There were, however, students who struggled with the “monitor checklist”. I

found that this was due to the fact that they were still in the planning phase of their learning task and not ready for the next phase.

In the third-year Illustration class, however, I discovered that the “monitor checklist” was very successful, because the students discovered problems within their learning tasks during this process. This gave them the opportunity to rethink their design solutions.

In the last class the students had to complete an “assessment checklist”. I found through the assessment checklists as well as my own observations that most of the students were positive and extremely proud of the outcome of their projects. They enjoyed the learning task and were able to see the benefits of the work process followed throughout the learning task. The exception was the third-year Illustration students. They struggled to see the benefits of the working process followed in this cycle.

I also discovered that most of the students enjoyed assessing their own learning as it gave them a sense of control over their learning. Thus, most of the students were proud to submit their final projects.

4.3.5.3 Learning task feedback and consolidation, as well as associated action research actions

The students responded well to learning task feedback and I found that it inspired them to think about their ideas and the execution of the learning task. Some second-year students, however, still expected me to give ideas and solutions. One must consider that they were used to this in their first year, thus it was something new and challenging to get used to.

I found that most of the students recognised their lack of learning during the learning task feedback and, because of this realisation, were motivated to rework their learning tasks.

The second- and third-year Illustration students came to my office for a professional meeting between a “client” and a “professional graphic designer”. The students had to prepare for this appointment since they were not able to disappear behind other students as in a classroom environment. My observations revealed that the learning task feedback during these meetings motivated the students to reassess their ideas for their learning tasks in order to ensure the highest possible learning quality.

This role-play scenario set the tone for positive and constructive learning in most cases, although there were individuals who struggled in this unknown environment.

It was evident in the next set of classes that the students were thinking about their progress and most of them came up with improved solutions on their own through this process. The students eagerly reworked their ideas where necessary. I found that most of them were very happy with their progress and excited to start with the execution of their final learning tasks. Thus, the students were inspired and challenged to acquire the essential artistic quality of creativity on the highest possible level.

This positive environment ensured that the students reacted positively to more challenges and this made them more thoughtful about their progress as well as about how to improve their learning even more.

The second- and third-year Illustration students had to present their learning tasks to the rest of the class. This was a positive experience for most of them, according to my observations. I found that they were proud of what they had learnt up to this point and that they enjoyed the encouragement and support. However, there were some students who were not ready to present their learning tasks. I documented that the presentations were an uncomfortable experience for them and that the learning task feedback was less effective due to the lack of learning.

Unfortunately I discovered that the discomfort, apparent resistance to do their learning task presentations – which are also associated with assessment of learning tasks - and subsequent lack of learning may not have originated purely from an academic point of view. Some students complained that exposing their learning task products and making copies and taking photographs thereof for whatever purpose is “stealing” their ideas and giving an unfair advantage to others when assessment is at stake. In order to prevent jeopardising the entire research project, which may spark unnecessary and even dangerous outcomes as indicated in par. 3.8, collecting visual data in any form as evidence was abolished immediately. Fortunately neither the research purpose, nor the project is dependent upon visual data as explained in the mentioned par. 3.8.

4.3.6 Review

It was discovered through the data that it is important to design the learning task and present it in such a way that students are challenged in order for learning to take place. If the learning task is challenging enough, students will be actively involved in the learning, which will ensure the maintenance of learning. It was found that in cases where the briefs were too easy, quality learning did not take place and this led to some misunderstandings later in the development of the learning task.

There was a lot of feedback on the learning task during the learning task execution and most of the students enjoyed it. This also assisted in the discovery of artistic solutions for the learning task challenges and the subsequent acquisition of the artistic quality of creativity. The learning task feedback in all the classes ensured that the students were on the right track and that the consolidation of the learning task bridged the gap from one class to the next in a meaningful way, this feedback was also to ensure that learning was maintained and that the quality of learning was enhanced, as recommended by Slabbert, De Kock and Hattingh (2009:CD-ROM).

According to my observations, in terms of planning one's own learning, executing one's own learning, monitoring one's own learning and assessing one's own learning, the metalearning checklists had a significant impact on the acquisition of the essential artistic quality of creativity and enhanced the quality of the learning of students in general. It also became clear that the more advanced students took to using such a checklist more easily than the less advanced students. It also seemed that over the entire spectrum of students those who kept pace in completing their learning tasks and therefore were more learning orientated utilised this checklist to their advantage. However, there were complaints by many of the students about the length of the checklist, and that might have interfered with the pace of their learning.

In the next cycle I addressed these shortcomings. I composed shorter and more effective checklists for the students in order to assist them in the planning, monitoring and assessment of their learning tasks. I hoped that this improvement would also get more students actively involved in their learning.

In this cycle of my action research it was clearly revealed that my facilitating learning interventions had a significant impact on my students' awareness of the essential artistic quality of creativity in graphic design. My facilitating learning interventions also had an impact on the acquisition of this quality. Students explored what artistic qualities entail and how they constitute being artistic through creativity rather than simply being taught a set of artistic techniques and applying it.

When students had to indicate anew what the essential qualities were that a graphic designer needs to acquire, creativity and (artistic) skill were again the prominent ones. Other prominent qualities were mentioned beyond the essential artistic quality of creativity (passion, dedication, general knowledge, optimism, etc.) as result of this cycle. This could not prompt an

easily identifiable set of qualities that could be categorised in a comprehensive set like “artistic” qualities can be represented by creativity.

This caused me discomfort due to the repetition of the same questions asked in the first cycle as a benchmarking endeavour. I realised at this point in time that the responses of the students to questions regarding the essential human qualities that a graphic designer should acquire was not sufficient or clear enough to productively continue with the research. This was due to no deficiency from the students’ side, but from a failure to produce a reliable essential quality construct from the students’ responses.

My aim for the next cycle was to find a construct that would encourage the identification of a subsequent set of human qualities that follow on the primary artistic quality of creativity. Fortunately, I was reminded of the work of Mezirow (2000) and Kitchenbaum (2008) who proposed that learning occurs on different levels. Each of these levels represents a particular purpose. Informative learning is about acquiring knowledge and skills; its purpose is to produce individual experts. This may equate to the necessary acquisition of the artistic quality of creativity – not in terms of having knowledge and skills, but in terms of becoming an expert and continually improving the level of expertise in creativity as it refers to graphic design students. Formative learning is about socialising students around values; its purpose is to produce collaborative and co-operative professionals working in a community of practice. The professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design practitioners is closely associated with human capital (Wenger, McDermott & Snyder, 2002:238).

Within this context, it seemed profitable to focus in the next cycle on a set of qualities most closely related to the artistic, namely the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design

practitioners. This will be abbreviated to simply “professional qualities” in most of the text with exceptions where the elaboration is more appropriate.

4.4 Cycle 3: Improving my educational practices to ensure the acquisition of the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design practitioners

The review on the data gained in the first and second cycle of the action intervention highlighted some shortcomings in current graphic design education and professional practices. Additionally, the importance of acquiring a set of essential qualities by professional graphic designers became evident. This set of qualities could best be described as professional qualities.

These findings led to the third cycle of the action intervention. In this cycle I intended to improve my educational practices in order to ensure the acquisition of essential professional qualities that would ensure a professional graphic design practice that would enhance quality of life in a professional way. However, the demand for creativity could not be relinquished. The following steps were followed in this cycle:

Cycle 3: Action research steps

- **Identify:** Improve my educational practices in order to challenge graphic design students to acquire the essential professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design practitioners.

- **Plan:** Design challenging, real-life learning tasks that demand the execution and expression of the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative value based community of graphic design practitioners and facilitate a learning process that ensures the highest possible learning quality. Through a process of facilitating learning, the process would demand the acquisition of the artistic quality of creativity within a facilitating learning context.
- **Action:** Present the challenging real-life graphic design learning tasks.
- **Observe:** This step represents the observation of the learning task execution by the learners and my competence in facilitating that learning process.
- **Reflect:** Reflect on the data collected through the process of observing the execution of the learning task by the learners and my competence in facilitating that learning process.
- **Review:** In terms of facilitating the learning process in order to ensure the acquisition of the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design practitioners at the highest possible level of learning quality, the data recorded in the reflective journal and the interviews, what kind of intervention would be necessary to lead to an improvement of my educational practices in terms of which my graphic design students will be challenged to acquire other human qualities that are essential for a career that enhances quality of life?

4.4.1 Identify

During the first cycle of the action intervention within the context of this research, and as depicted in the literature study, a wide variety of essential qualities were identified to be essential qualities that graphic design students should acquire for a career that enhances quality of life. Although no obvious and easily distinguishable new set of qualities could be identified from the data of the previous action research cycle, an existing construct of learning quality provided a foundation to progress into the next cycle of this action research project. However, some of the identified qualities in the previous cycle can now be associated with professional qualities as they emerged from the data: one needs an ability to interpret and the acknowledgement of one's strengths and weaknesses. One needs to be direct, hardworking, efficient, experienced, informed, serious and organised. Business skills, good working relationships and being a team worker are also essential professional qualities. One needs to be a quick thinker, as well as a researcher. The ability to plan, network and manage one's time is other important aspects. It is also important to persevere, visualise the needs of the client and please them.

Subsequently, I wanted to challenge my second- and third-year graphic design students to acquire professional qualities. Thus, I needed to make more adjustments to my educational practices in cycle three. The findings from cycle two were also borne in mind while adjusting the educational practices.

4.4.2 Plan

The planning step of this action research cycle was the same as in cycle two.

4.4.2.1 The learning task design

The following challenging, real-life, graphic design learning tasks were designed for the corresponding groups of students to acquire professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-operative, value based community of graphic design practitioners through engaging with, exploring, constructing, expressing and eventually acquiring the quality in all its possible constituents.

a. General Drawing II (*Stylised drawing*)

My company wants to use a simplified drawing of a baobab tree as part of our logo. Please provide me with at least four of your best and most unique drawing ideas.

b. Illustration II (Professional product illustration)

As art director of this company it is important for me to be able to make a clear distinction between your unique marker-rendering style and at the same time honouring this company as premium graphic design company. Render any Nestle product on A3 bleedproof paper and mount it on A2 black board for my approval.

c. General Drawing III (Wallpaper drawing)

The new building we will occupy soon has one face consisting completely of windows facing the rising sun. As a company protecting the Big Five, I want you to design a patterned 40% sunshade to be pasted onto the windows and the same pattern repeated on the wallpaper we want to use on our walls.

d. Illustration III (Decorative illustration)

I am the managing director of an arcade game development company and I want you to create a gorgeous, unique-looking illustration for one of the arcade games, as indicated in this information sheet.

4.4.3 Action

The learning tasks were presented verbally in a role-play format in which I was a client and/or company CEO and the students the professional graphic designers. The students executed the learning tasks in co-operative learning groups of four students each, playing the roles of graphic designers who needed to work in teams. The learning tasks were also provided to the students in written form.

4.4.4 Observe

This step in the action research cycle in this research contains the observation of the learners' learning task execution through authentic learning, metalearning and co-operative learning, and my learning task feedback and consolidation as well as associated action research actions.

4.4.4.1 The learning task execution through authentic learning, metalearning and co-operative learning

The learning tasks have been designed particularly to evoke the acquisition of the professional qualities of a graphic designer. In addition, graphic design has a social function and responsibility and even in its production requires social relationships between one or more graphic designers and one or more clients, while the solitude of the designer to engage in a graphic design

challenge is inevitable in its professional execution. In this sense the learning tasks were designed to ensure creative idea generation, social interaction and subsequent professional execution.

a. Learning task execution through metalearning

After the learning task presentation I divided the classes into co-operative learning groups of four students each. Each co-operative learning group played the role of a group of graphic designers from the same company who had been approached and contracted by a client to do work (project). However, although the students were divided into co-operative learning groups, they would work individually first. The reason for this was that they needed to first engage in metalearning, i.e. planning their learning, executing their learning, monitoring their learning and finally assessing their learning. In this way they were challenged to engage in authentic learning through which fundamental intrapersonal human qualities could be acquired. Only if they acquired these competencies individually would they be empowered as active, effective, independent lifelong learners.

I provided the students with a preparation form to assist them in the preparation of their learning. A preparation form encourages students to verbalise concepts, and this is a major conceptual tool according to research done by Jonson (2005).

De la Harpe (2007:22-28) is of the opinion that proper preparation is essential to ensure that the creative process is on the right track or that adequate information is gathered to facilitate idea generation. In order to prepare effectively for a given task, one must set goals, gather enough information and frame the problem.

Each student had to set the goals for the project they needed to complete by determining the main objectives and aspirations of the client. These goals would ensure that the client and designer understood and agreed on the important aspects of the project (De la Harpe, 2007:23).

The next step was to frame the problem in a written statement. De la Harpe (2007:26) describes this as formulating a concise statement that frames the parameters of the creative problem. This statement should aim to reflect the most fundamental requirements of the project in order to keep the designer focused. The students had to define the essence of the problem statement in the brief in their own words.

The following preparation form, adapted from De la Harpe (2007:23) and depicted in Table 4.5, was presented to the students.

PREPARATION – a roadmap for creativity		
Student Name:		
Project:		
Setting goals	What outcomes are expected of the finished project?	
	What is the key purpose of the project?	
	What must I communicate?	
	Who is the target market?	

	What would be the ideal look and feel?	
Framing the problem	In your own words, neatly define the problem statement that narrows the brief down to its essence:	
Gathering information	Generate creative ideas	

Table 4.5: Preparation form

In addition, after completing the preparation form each individual student had to complete the metalearning checklists referred to in the previous cycle. I attempted to make the checklist more user friendly as a result of the student complaints in the previous cycle. The students had only to tick “yes” or “no” after each of the questions in the “planning checklist” (see Table 4.6).

PLANNING CHECKLIST			
Student Name:			
Project:			
Topic	Do I completely understand this project?	YES	NO
	Do I already know something about this project?	YES	NO
Detail	Do I know enough about what this project entails in order to start?	YES	NO
	Do I know what the most important aspects of this project are?	YES	NO
Task	Do I know what I will have to do in order to complete this project?	YES	NO
	Do I know the steps required to complete this project?	YES	NO
	Is this new to me?	YES	NO

	Do I know what I will gain from doing this project?	YES	NO
	Do I know how I will be able to use the outcome of this project?	YES	NO
	Will I have to change to do this effectively?	YES	NO
	Is this the best way to do this project?	YES	NO
	Will this be difficult?	YES	NO
	Do I know how much time this will take?	YES	NO
	Can I predict the outcome of this project?	YES	NO

Table 4.6: Condensed planning checklist

b. Learning task execution through metalearning: The ideation process – acquiring the artistic quality of creativity (continued)

The ideation process that is the gathering of ideas (De la Harpe, 2007:29-30), was the focus of the second set of classes. Creating original ideas as a solution to the learning task has to be a primary concern regarding the education of the graphic designer, because graphic design is unimaginable without the quality of generating ideas.

In the second set of classes in this cycle, all four subjects focused on the ideation process in which the students were challenged through particular learning task feedback actions to explore different creativity techniques to improve their capacity to generate new ideas. Olsen, Williams, Sochats, & Hirtle (S.a.:4) describe ideation as a cognitive process intended to develop new ideas. During the ideation process a person would compare, rearrange, combine, reduce, isolate and evaluate concepts and data that are present in the cognitive processes. A problem with ideation, however, is that the mind has a fairly low capacity to keep a number of entities active at once. Thus, tools or

techniques are essential to activate additional concepts or data in order to make them available to the mind without losing those that were already present.

De la Harpe (2007:29-30) claims that the ideation process is the most vital activity in the entire creative process, but she also mentions that it could be the most difficult one for a lot of people. For this reason she based her book on different creativity techniques. These techniques have short-term advantages in assisting idea generation, but may also have long-term advantages because they are used to cultivate habits and attitudes conducive to creative thinking. These techniques mimic the cognitive processes that accentuate creativity, in other words they strengthen creative abilities by providing exercise in the thinking processes.

In order for this ideation process to be successful, the students had to explore what it entails and what is required to become a spontaneous idea generator, as already alluded to in the previous cycle, but here emphasised by De la Harpe (2007:34-37):

- “Defer judgement of ideas” - Don’t judge ideas while in the generation process. As soon as you say “yes” to an idea it will immediately block future ideas and this can then be a great stumbling block to creativity.
- “Quantity breeds quality” - Idea generation is not to find a single idea, but to generate large quantities of ideas. This will push one beyond the “saved” ideas in order to generate less obvious ideas.
- “Have fun” - The emphasis must be on play rather than on work, because a playful mindset is very important for creative thinking.

The second- and third-year General Drawing classes explored two ideation techniques during this ideation phase, namely the random technique and the trigger technique. The second- and third-year Illustration classes explored two other ideation techniques, the big six technique and the mind map technique.

(i) The random technique

Research shows that the process of making new and unexpected associations between unrelated concepts often leads to highly creative solutions in problem solving (Santanen, Briggs & De Vreede, 2000:3). According to De Bono (1995:18), this technique is so simple that it is hard to believe that it is effective.

De Bono, however, promotes the technique of random association as a lateral thinking approach because of its effectiveness to spur creativity. He states that it creates the ideal brain conditions for an innovative idea to arise. The technique is based on the brain's extraordinary ability to create order out of chaos. In other words, when faced with a random concept next to a problem concept, the brain will attempt to force a relationship or find a logical association between the two unrelated concepts. Thus, this technique will enable a designer to create new perspectives on a given problem by forcing the brain to not follow the predictable pathways (De la Harpe, 2007:43-44).

The second- and third-year General Drawing students had to explore the random technique and do so individually. They had to randomly select elements (words, images, objects, etc.) from newspapers, preferably unrelated to the learning task, and place these unrelated elements next to the creative challenge with the aim of forcing a connection between the creative challenge and the unrelated element. These connections should have triggered new and original ideas by

alerting the mind to new possibilities that would otherwise not have been considered.

(ii) The trigger technique

De la Harpe (2007:63) describes this technique as the “Rolls Royce” of creativity techniques, because it uses a list of pre-determined creativity triggers to transform existing ideas or inspire new ideas. The main aim of this technique is to turn one’s thinking away from established thinking patterns in order to transform thinking into new lines of thought.

The students were challenged to use as many as possible of the creativity triggers suggested by De la Harpe (2007:66-75) and depicted in Table 4.7.

CREATIVITY TRIGGERS	
<i>Replace</i>	Freely replace elements.
<i>Combine</i>	Make witty combinations or synthesise elements in a clever way.
<i>Adapt</i>	Use a process of adaption of other styles for a creative solution.
<i>Minify</i>	Use reduction to explore creative alternatives.
<i>Magnify</i>	This entails the opposite of minifying.
<i>Reverse</i>	Reverse existing concepts or design elements to discover new approaches/perspectives.
<i>Eliminate</i>	Simplify the design through elimination.
<i>Animate</i>	Mobilising static elements.
<i>Superimpose</i>	Overlap or cover elements or images.
<i>Fragmentation</i>	Consider various forms of visual fragmentation.
<i>Isolate</i>	Isolate certain elements to place greater emphasis or new meaning on the design.
<i>Distort</i>	Distort images to radically transform them.
<i>Repeat</i>	Use repetition to effectively solve a creative problem.
<i>Geometry</i>	Play with geometrical shapes to alter a design.
<i>Light & shadow</i>	Discover the impact of various forms of light on a design.

Context	Deliberately transfer elements from their existing context to another context.
Dimension	Translate two-dimensional elements into three-dimensional elements and vice versa.
Texture	Use interesting textures to create visual variation.
Damage	Think of certain damaging substances or activities and apply them to elements.
Time	Experiment with typical elements of various periods in history.

Table 4.7: Creativity triggers

The second- and third-year General Drawing students had to use these triggers to develop a wide range of possible solutions to the creative problem. De la Harpe (2007:63) suggests that students must experiment with as many triggers as possible to find a selection of creative options that could assist in solving the creative problem.

(iii) The big six technique

The main aim of the big six technique is to facilitate a thinking style that will help the thinker gain various perspectives of the problem in order to generate ideas that could solve the creative problem. The method uses six words as starting points for questions in order to generate more questions and answers about the problem. Thus, the aim is to generate as many questions as possible, starting with who, what, where, when, why and how. These questions must then be related to the context of the project in order to generate ideas (De la Harpe, 2007:39).

The big six technique prevents the natural tendency of the brain to think in patterns. At a particular point in time, the second- and third-year Illustration students were divided into groups of six each that functioned as a unit for the time of the exercise. Each individual in the group was given one of the big six technique words, namely who, what, where, when, why and how. Each person was then asked to generate questions related to the creative challenge with the word that had been

given to him or her. After 10 minutes they had to answer each other's questions in the group.

(iv) The mind map technique

Mind mapping as a thinking technique was developed in the early 1970s by Tony Buzan, a British brain researcher. He saw a mind map as a “whole-brain” alternative to linear thinking. Thus, mind mapping improves the brain's potential to investigate one or more concepts into a multitude of other concepts that could aid in generating ideas (De la Harpe, 2007:52).

At a particular point in time, the following instructions were given to the students in order to construct a mind map that would empower them to create more ideas (De la Harpe, 2007:52):

- Write the main theme of the creative challenge in the centre of a sheet of paper.
- Divide the theme into a number of significant components or keywords that embody the essence of your central concept. Arrange the keywords around the central concept, connecting them with lines to the centre.
- Link each keyword with a number of related associations, features or characteristics.
- Use each of these words as a starting point for another cluster of words. Repeat the process until you have generated a large number of concepts that are either directly or indirectly related to the central concept.

- Use the words (or the “dialogue” between the words) to trigger new ideas.

Exploring these four ideation techniques had the aim of empowering the students to create new ideas as part of the artistic quality of creativity that a graphic designer has to possess.

(v) Marker-rendering techniques

The second-year Illustration class was given a demonstration on different marker-rendering techniques. Slabbert, De Kock and Hattingh (2009:CD-ROM) describe this as edutainment. According to them this is only allowed under very special circumstances. It was, however, necessary in this class, because the students required the skill in order to continue solving the creative problem. Acquiring the skill through authentic learning would have taken up too much time and would have distracted the students from the actual outcome of the learning task. During this demonstration the students had to experiment with the techniques and give immediate feedback to the rest of the class.

c. Learning task execution through co-operative learning

Only after each individual student had generated additional new ideas by utilising the ideation techniques were they challenged to individually and/or co-operatively complete the learning task. The individuals of the co-operative learning groups had to get together and share what each one had done. All the members had to at least have critically assessed the others' work and therefore ensured that the highest possible quality of learning had been achieved by each individual, as well as co-operatively as a team.

d. Completion of learning task execution

To complete this learning task the students had to work mainly individually, as in this way they would be empowered to acquire personal fundamental human qualities.

The third set of classes during cycle three focused on the monitoring of own learning, as described in par. 4.3.4.1. The students had to complete a “monitor checklist” adapted from Slabbert, De Kock and Hattingh (2009:CD-ROM). As noted, I made this checklist more user friendly than in the previous cycle, as depicted in Table 4.8.

MONITOR CHECKLIST			
Student Name:			
Project:			
<i>New knowledge</i>	Can I compare this new knowledge to what I knew previously?	YES	NO
	If yes, specify		
	Do I have to change my understanding of what I previously knew?	YES	NO
<i>Understanding</i>	Do I understand what I am doing?	YES	NO
	Can this relate to my understanding of other projects?	YES	NO
	If yes, how can this be implemented in other projects?		
<i>Progress</i>	Is this the best way of doing this project?	YES	NO
	Does the execution of the project seem correct?	YES	NO

	Do I know what the next step should be?	YES	NO
	Am I checking all possibilities?	YES	NO
	Do I know where this will lead me?	YES	NO
	Do I enjoy this?	YES	NO
Completion	Have I completed this fully and carefully thus far?	YES	NO
	Do I know what else needs to be done?	YES	NO
	If yes, specify		

Table 4.8: Condensed monitor checklist

e. Assessment of learning task execution

The last set of classes in this cycle were characterised by the assessment of own learning, as described in par. 4.3.4.1, as well as the submission of the final learning tasks.

Thus, the student had to complete an “assessment checklist”. This checklist, as depicted in Table 4.9, was more user friendly than in the previous cycle, but was still adapted from Slabbert, De Kock and Hattingh (2009:CD-ROM). The checklist should have empowered the students to assess their learning as well as their acquisition of professional qualities.

ASSESSMENT CHECKLIST			
Student Name:			
Project:			
Quality	Could I have done this project even better?	YES	NO
	Do I fully understand this project?	YES	NO
	If no, what will I have to do to fully understand it?		
	Do I understand enough to justify stopping?	YES	NO
	How does mine compare with others?		
	How do I feel about this?	YES	NO
Future	Can I use this in the future?	YES	NO
	What did I learn from this?		

Table 4.9: Condensed assessment checklist

It was obvious that the students were not very accepting of the “difficult client” and CEO. Neither were they comfortable with their initial ideas not being accepted. They welcomed the exposure to the ideation techniques and the challenge of using them. However, initially they were slow in getting to grips with how they operate, but they seemed to work more efficiently with them as time went by.

The students handled the metalearning fairly well, but some students were reluctant and even uncomfortable with co-operative learning. A concerted effort from my side resolved most of the challenges.

The students utilised the adapted metalearning checklists with far more positive attitudes and were proud when they could assess their own work at the end. The students also enjoyed the edutainment.

4.4.4.2 Learning task feedback and consolidation, as well as associated action research actions

Learning task feedback followed the required facilitating learning actions. However, the learning tasks themselves, as they had been designed, were already quite challenging, as they would be in real-life. In addition, my role play as either client or company CEO had to follow a much more intense criticism of and dissatisfaction with the initial creative ideas offered by the students as a group of graphic designers. The students needed to “experience” a very “difficult” client or CEO. This would compel the students to seek additional resources (the ideation techniques) through which they would be able to create a sufficient number of new ideas to satisfy the “customer” or “CEO”. The individual metalearning and co-operative learning also had to aggravate the conditions for the acquisition and expression of the professional qualities of a graphic designer.

I ended all the classes with a critical assessment of the quality of their learning in order to ensure the continuous flow of learning from one learning period to the next as learning task consolidation (Slabbert, De Kock & Hattingh, 2009: CD-ROM).

In the last set of classes the students had to submit their final learning tasks for official assessment. My colleagues in graphic design did this assessment, which took place after the learning period.

I discovered that the students had difficulty with the presentation of the learning task (written or oral) when they had to complete the preparation form and planning checklist. This did not present a problem, however, since

real-life often presents a serious negotiation between the designer and the client regarding the interpretation of what exactly is expected. Many students were obviously upset with the “client” and “CEO” and some were even angry because their ideas were never good enough. Their professional qualities were seriously challenged.

Learning task consolidation was very important to the students because in some instances they could not understand why their ideas were not accepted and they had to be debriefed about those concerns, namely that in real-life even good ideas may be rejected by clients. Also, although meaningful negotiation has to be pursued, the satisfaction of the client is always primary. They also wanted immediate feedback on the work they had submitted.

4.4.5 Reflect

The reflection on this cycle follows logically from the preceding paragraphs and in particular from the “Observe” step in this action research cycle. Therefore, in this reflection I highlight only the most significant observations that were made.

The learning tasks were well designed and, although they were not real-life learning tasks but hypothetical ones due to the simulation and role-play notion, they were “world of work” ones. The students who had already worked with or were working with professional graphic designers testified to its real-life status. The tasks contained all the difficulties, uncertainties and irrationalities, but also challenges, inspiration, pride and more that a graphic designer might find in real-life.

In addition, although the students did not feel completely prepared for their careers, they appreciated that these real-life challenges were preparing them well for their careers, as validated by the students who already had experience of this professional reality.

Although there was no reference to any particular teaching method, the students referred positively to the fact that they were compelled to explore the ideation techniques by themselves and that they acquired the knowledge themselves without it being taught to them – referring to the professional discipline of keeping abreast with the newest developments in graphic design. In addition, being subject to what it means to be professional amidst internal and external challenges within the professional community of graphic design practitioners became at least a simulative reality to students.

The feedback on the learning task was crucial, especially to ensure enhanced learning quality.

The consolidation of the learning task has become very important in this kind of education paradigm, because it serves as a debriefing mechanism in which students can come to grips with the anomalies and paradoxes with which they will be confronted in real-life.

One final remark is that the students started to realise that professionalism was much more than doing a job and earning money.

The students welcomed the preparation form and the question checklists. However, they would need to internalise these and be weaned from the actual lists as soon as possible if they are to become true professionals.

4.4.6 Review

It was encouraging to recognise the students' improvement over this short period of time. They became aware that their profession required them to become experts in the artistic quality of creativity. The profession also required the discipline of planning, executing, monitoring and assessing their learning and thus acquiring the professional quality of continuous, independent, increasing expertise in creativity within an interdependent, co-

operative, value based community of graphic design practitioners. The close association of this essential quality to the previous one is obvious.

Although acquiring of the artistic and professional qualities was now established, these qualities had to be assimilated and internalised by the students so that they could become independent and weaned from the assistance of forms and checklists. This is a challenge locating within the development of the person itself.

Personal development is a prerequisite for professional development. As Glen (1998:97) argues, “In essence, professional development implies personal development”. Furthermore, Barnett (2007:102) is very explicit when it comes to personal development in higher education: “A higher education that does not call for, does not insist on, authenticity in the student is no higher education.”

The focus of the next cycle should therefore be on the acquisition of the essential personal quality of maximising human potential – which will be abbreviated to simply “personal qualities” in most of the text with exceptions where the elaboration is more appropriate.

4.5 Cycle 4: Improving my educational practices to ensure the acquisition of the essential personal quality of maximising human potential

It is clear that the previous cycle was effective, but that professional development may not be adequate if personal development is not of the highest order. Even though the acquisition of professional development preceded personal development in this research, the fact that personal development should take precedence over professional development has now been honoured.

This realisation led to the fourth cycle of the action intervention, which will also include the rectification of some important factors that were revealed in the previous cycle. In this cycle I intended to improve my educational practices in order to ensure the acquisition of essential personal qualities that will guarantee a professional graphic design practice and therefore enhance quality of life and ensure employability. The following steps were followed in this cycle:

Cycle 4: Action research steps

- **Identify:** Improving my educational practices in order to challenge graphic design students to acquire the essential personal quality of maximising human potential.
- **Plan:** Design challenging real-life learning tasks that demand the use and expression of personal qualities by graphic design students and facilitate a learning process to ensure the highest possible learning quality. Reflective journal entries. Interviews with students in graphic design.
- **Action:** Presenting the learning tasks, having the learners execute them and facilitating the learning process to ensure the highest possible learning quality. Note taking in a reflective journal. Execution of interviews.
- **Observe:** Observing my own process of facilitating learning as well as the execution of the learning task by the students and analysing the reflective journal and interview data.
- **Reflect:** Reflection on the data collected through the process of facilitating learning, the reflective journal and the interviews.

- **Review:** The facilitating learning process in order to ensure the acquisition of personal qualities at the highest possible level of learning quality. The data recorded in the reflective journal and the interviews, in order to review what kind of intervention would be necessary to cause the improvement of my educational practices whereby my graphic design students might need to acquire other human qualities that are essential for a career that enhances quality of life?

4.5.1 Identify

According to the preceding cycles in the action intervention within the context of this research and as depicted in the literature review, a wide variety of essential qualities have been identified by the participants in the previous cycle, of which a particular set could be categorised as personal qualities. However, these qualities are so wide and varied that they lack coherence in the sense of a comprehensively identifiable set, which will reveal individual authenticity. However, Purpel and McLaurin (2004:176) indicate the relationship between education and authenticity when they say that education is not about finding things, but about finding ourselves. Ackoff and Greenberg (2008:xiv) state the following: “Education should be a lifelong enterprise, a process enhanced by an environment that supports, to the greatest extent possible, the attempt of people to ‘find themselves’ throughout their lives”. Authenticity, therefore, manifests as potential. In that sense, authenticity is not simply there for the taking, “it has to be fought for, won and sustained” (Barnett, 2007:40).

In this context, Slabbert, De Kock and Hattingh (2009:49) formulate the following aim of education: The aim of education is to empower learners to maximise (completely develop and fully utilise) their human potential (fundamental human qualities) through facilitating lifelong authentic

learning (resolving real-life challenges) in order to create a safe, sustainable and prosperous future for all.

The value of the acquisition of the personal quality of maximising human potential cannot, therefore, be underestimated as qualities that are essential for graphic design students in order to enhance quality of life. It should be obvious that I need to employ the most effective and appropriate educational practices for this purpose. Therefore, I again used facilitating learning, but I made the necessary adjustments in order to focus specifically on personal qualities. The findings from cycle three were also borne in mind while adjusting my educational practices.

4.5.2 Plan

The planning step in this action research cycle was the same as in cycle two.

4.5.2.1 The learning task design

Four real-life challenges were designed for this cycle, one learning task per subject, and they concentrated on the personal quality of maximising human potential in a unique and challenging way. These learning tasks were presented to the learners in oral and written form:

a. General Drawing II (Drawing in specific styles)

There are many different drawing styles that can be utilised in order to express a specific feeling and/or mood. You as a graphic designer must be able to utilise the different drawing styles to effectively communicate one of the following emotions as accurately as possible: love, cheerfulness or

sadness, in an assortment of appropriate drawing styles to fill the given grid.

b. Illustration II (Stylised illustration)

You are going to view a video clip of the tsunami that struck Japan four days ago and the subsequent environmental and humanitarian destruction and devastation, and see how rescue workers and other volunteers are working around the clock to find people dead or alive, to clean up the mess, to comfort the living, and to try to make the best of it all. And it is the children who do not know whether their parents are dead or alive who suffer the most.

View the video clip.

You now have the opportunity to improve the quality of these children's lives by sending them a customised care package consisting of at least three items that they would need right now. This package must also incorporate an illustration that will comfort and encourage them. You don't have time to create a new illustration to be used in this package; therefore you are to use the four stylised drawings that you've created in your General Drawing class. Further modify these drawings to create an appropriate illustration to apply to your package. Remember this package must clearly represent your personal sentiments towards these children.

c. General Drawing III (Decorative drawing)

View video of Nick Vujicic.

The challenge to find and fulfil one's calling in life is perhaps the most important task that you will ever face. Have you found your own path in life? Your own shoes to walk in – shoes that feel more and more comfortable the further you walk in them?

You are challenged to strikingly and creatively communicate your purpose in life through attractively decorating your own shoes. You are then challenged to put on your shoes and wear them for the next week for everyone to see what your ultimate purpose in life is.

d. Illustration III (Digital illustration)

You are appointed as a graphic designer at Event Elves CC (www.eventelves.co.za), a dynamic event management company. They have a distinct passion for the industry and thrive off the vibrancy and energy generated from a fast-paced lifestyle. They are trend-setters, go-getters and continuously strive to stay ahead of the pack. They work hard, but never forget to appreciate the fun element of their industry. You are now one of them and need to provide evidence of your personal qualities that you will fit in perfectly through your first project.

Herman Pretorius has been involved in the South African music scene for a long time. Herman worked as a production assistant at M-Net In-house Productions. It was there that the initial idea for an Afrikaans music channel developed. Herman sourced the first 1000 South African music videos and performances that would eventually make up the bulk of the MK channel content. He also presented the music show AMP. At the peak of his career (aged 28) he was however diagnosed with stage 3 testicular cancer and a secondary lymph cancer as well as tertiary lung tumours, which were malignant.

In his fight against cancer he started the Vrede Foundation, an organisation fighting to ensure a quality life for young people with cancer.

Herman passed away, but the Vrede Foundation continues in his name, determined to carry on with the goal to assist young people with cancer. In order to raise money, one of the organisation's projects is the Vrede Fest.

View video clip of previous Vrede Fest.

Your challenge is to help the Vrede Foundation to be sponsored as never before during their upcoming Vrede Fest (www.vredefoundation.co.za). The Vrede Foundation is a non-profit, public benefit organisation with the aim to generate awareness amongst young South Africans (aged 15-29) regarding cancer and to raise funds and provide financial aid to young South Africans with cancer who don't have medical aid. They are planning the Vrede Fest 2011 to be held at Stones in Edenvale and Hatfield Square in Pretoria. Rocking acts for this festival include aKing, Van Coke Kartel, Evolver One, Merseystate, Mrs B and Candi Black. (The background information for this brief was obtained at www.vredefoundation.co.za and www.eventelves.co.za)

You are challenged to design a party box that will be handed out to VIPs attending the festival. This party box must be creative and innovative in its form and size and must include an interesting and exciting digital illustration that will get the foundation's message across clearly. You must use this assignment to show your personal qualities as a graphic designer to ensure that you are accepted as one of the team members at Event Elves.

4.5.3 Action

In all four classes, students were confronted with a learning task that involved emotion – some learning tasks were more explicit in this than others. Learning, says Claxton (1999:35), is primarily an emotional business. Emotion is also the key to accessing our authenticity located in the domain of our spiritual intelligence, and spiritual intelligence is the source of who we really are. That is why all the learning tasks had an emotional connection.

However, each student group was confronted with a different “emotional” learning task and the learning task presentations also varied.

It was obviously a challenge to the second-year General Drawing students to produce a concrete drawing of an abstract feeling – emotion. Fortunately they were challenged to explore and recognise different drawing styles and were compelled to relate them to an emotion. The students were also unfamiliar with the restrictions of a grid as one of the requirements of the learning task.

The learning task of the second-year Illustration students involved the reality of the tsunami in Japan in its graphic detail of devastation, destruction and despair. The video which was shown ignited high levels of emotion in the viewers. Further, based on the initial reactions from the students when they were confronted with the learning task, the idea of assisting the victims was an alien one. It was alien not only regarding its unfamiliarity, but also because their initial responses were characterised by their conviction of inability to do something about the situation. This, interestingly enough, started a heated debate around the fact that they had indicated in previous cycles that they could make a difference as graphic designers, thus what would be the obstacle this time? Although the debate was heated, all the students eventually agreed that they could make a difference as graphic designers – even in such dire circumstances. Some of them even started to make plans on how they could get involved in projects to reach the victims.

The students went through a number of different emotions, starting from unbelief to despair to uncertainty to helplessness to relief to thankfulness to reserved joy and inspiration.

The learning task presentation to the General Drawing III class started with a very emotional viewing of a video called *"No arms, no legs, no worries"*. This video stirred intense emotions amongst the students. The students were significantly humbled and became more thankful for their abilities. Some of them expressed some agitation for not enjoying what they had. I then presented the students with the learning task, as well as a brand new pair of running shoes in exchange for what they would do to their shoes. They were surprised and overwhelmed by this gesture. Some students could not believe that the shoes were theirs and that they could keep them. This had a huge impact on all the students.

In the third-year Illustration class I presented the learning task verbally and provided a written version afterwards.

As could be expected, the students were somewhat apathetic regarding the learning task because none of them suffered from cancer. However, one student had been diagnosed with cancer a few years previously. She shared this experience with the rest of the class and the reciprocal sharing became very emotional.

The same state of initially being convinced that nothing could be done about cancer, to the turnabout that as graphic designers they could make a difference occurred with the presentation of this learning task.

4.5.4 Observe

This step in the action research cycle in the research contains the observation of the learners' learning task execution through authentic learning,

metalearning and co-operative learning, and my learning task feedback and consolidation as well as associated action research actions.

4.5.4.1 The learning task execution through authentic learning, metalearning and co-operative learning

As mentioned, the learning tasks have been designed in particular to evoke the acquisition of personal qualities. These learning tasks were executed through authentic learning, metalearning and co-operative learning

a. Learning task execution through metalearning

Even though the students were not provided with preparation forms and question checklists, they all engaged in authentic learning and learning task execution through metalearning and started to plan, execute, monitor and assess their individual learning – albeit with varying degrees of efficiency.

The learning tasks were all a challenge to engage with, explore, construct and express personal qualities. The focus was primarily on metalearning and substantial time was allocated for appropriate and sufficient metalearning in order for the intrapersonal qualities to be acquired. Only after substantial time was allowed, did co-operative learning commence in order for the interpersonal qualities to be achieved.

b. Learning task execution through co-operative learning

Co-operative learning followed metalearning and in each subject the students were facilitated during co-operative learning through a

different co-operative learning technique. These techniques provided interpersonal challenges in order to ensure the authenticity of the personal qualities.

In the second- and third-year General Drawing classes I facilitated co-operative learning through the “review pairs” technique. In the second-year Illustration class the co-operative learning technique that was used was the “think-pair-share-switch” technique. However, in the third-year Illustration class the metalearning was followed by edutainment.

(i) “Review pairs” technique

This technique ensures powerful interaction and is described by Slabbert, De Kock and Hattingh (2009:CD-ROM): “The groups (each made up of four learners) work in pairs. Each pair has the same task. Partner 1 executes the first part of the task aloud and in writing whilst Partner 2 listens, watches and coaches – asks questions, gives suggestions, encourages – but never takes over the role of Partner 1. The partners reverse roles for the next part of the task. The two pairs confer to reach consensus as regularly as possible.”

This technique was implemented, but with some adjustments suitable to the specific learning task. I divided students into groups of four and then into pairs. Within the pairs, one student was given an art director’s nametag and the other a graphic designer’s nametag. The graphic designer then had to present their design solution. The art director had to listen, ask questions, give suggestions and encourage, but never take over the role of the graphic designer. The two pairs had to confer as often as possible to reach consensus. As soon as the whole group was pleased with the outcome, the students had to switch nametags and do the exercise again.

I observed that the second- and third-year General Drawing students loved the role-play opportunity in the “review pairs” technique. The students seemed to convincingly experience their roles as art directors and graphic designers. Some of them even pretended to be real companies and others wanted to wear the nametags the whole day.

(ii) “Think-pair-share-switch” technique

The “think-pair-share-switch” technique ensures positive interdependence. Slabbert, De Kock and Hattingh (2009:CD-ROM) explain the technique as follows: “A task is given to the class. Two learners of each base group pair to find an answer, then they switch partners and share their previous responses with their new partners to find better resolutions. They then share all responses with the cooperative learning group to find a better resolution after which they share it with the class.”

I explained the technique to the students and then divided the class into pairs. In these small groups they had to discuss their design solutions. I gave them 15 minutes to critically assess one another’s work, after which they had to switch partners. The students then had to share their previous responses with their new partners and aim to find better solutions in the new group. The final and best solutions were shared with the class.

The second-year Illustration students had a hard time in deciding what the tsunami orphans would need and what would inspire and encourage them, especially since there is such a big cultural difference between Japan and us. However, individual students soon started to plan the execution of their projects.

However, I observed that this technique was not as successful as the “review pairs” technique.

(iii) Edutainment

In the third-year Illustration class the metalearning was followed by edutainment. As noted in par. 4.4.4.1, according to Slabbert, De Kock and Hattingh (2009:CD-ROM), edutainment is only allowed under very special circumstances. However, it was necessary in this class, because the students needed digital illustration skills in order to solve the creative problem in the learning task. Acquiring the skill through authentic learning would have taken up too much time and would have distracted students from the actual learning outcome.

I invited an illustrator/graphic designer who is working in the field of digital illustration to do the edutainment. I observed that he really inspired the students. They asked a lot of questions and wanted to try the techniques that he demonstrated immediately.

**c. Learning task execution through co-operative learning
(continued)**

The second set of classes also focused on co-operative learning techniques. In the second- and third-year General Drawing classes I used the “talking chips” technique and in the second- and third-year Illustration classes I used the “focus discussion pairs” technique.

(i) “Talking chips” technique

The “talking chips” technique, as suggested by Slabbert, De Kock and Hattingh (2009:CD-ROM), ensures powerful interaction and is described as follows: “Each learner receives a number of chips or tokens (e.g. three). Each time that individual learners participate (talk), they surrender one chip. When learners have used all their chips they cannot participate unless all the group members have surrendered all their chips” (Slabbert, De Kock & Hattingh, 2009:CD-ROM).

This technique was used with some adjustments in order to be more suited to the learning task. The students were divided into groups of four and I gave each second-year student five little stones and each third-year student seven little stones as tokens. One student had to present their idea to the rest of the group. The group was requested to allow that person to finish the presentation and then to make improvements on the idea. Every time a person made an improvement, they had to put a token down. All the tokens had to be used and the students were not allowed to speak when their tokens were finished. When all the tokens had been used, the next person in the group had to present their idea and everyone in the group again had to make five or seven improvements, depending on the year of study. This process repeated itself until everyone in the group had presented their ideas.

I observed that most students enjoyed the “talking chips” technique because they had to use their stones to be allowed to speak. This also forced everyone in the group to participate and it prevented students from taking over the discussion. Some students wrote the improvements that were made down and they then discussed which ones would be most effective. Most of them were very involved in the whole process and it took pride in helping each other to improve their ideas.

(ii) “Focus discussion pairs” technique

The “focus discussion pairs” technique, as recommended by Slabbert, De Kock and Hattingh (2009:CD-ROM), ensures individual accountability and is described as follows: “Each co-operative learning group gets a task. Individual members of a pair produce a resolution. Partners share their resolutions. Partners now have to come up with a better resolution than either individual’s. Anyone of the pair needs to be able to accurately share the new resolution as well as the thinking behind it” (Slabbert, De Kock & Hattingh, 2009:CD-ROM).

I adjusted this technique a little in order to suit the learning task. The students were divided into pairs. The first student had to present their idea to their partner. The partner then had to improve on that idea. After this process the roles were swapped in order to ensure high quality learning.

According to my observations the students enjoyed this technique and they eagerly improved on each other’s ideas.

4.5.4.2 Learning task feedback and consolidation, as well as associated action research actions

Although no role-play was involved in this cycle, the learning task feedback by me as the facilitator of learning had to maintain the same intensity as in the previous cycle. The purpose was to determine the authenticity of those qualities that may be exposed during an intensive scrutiny.

Although the students themselves executed the co-operative learning in this cycle, I facilitated the process through learning task feedback when the students shared their ideas with their co-operative learning group members and were being critically assessed by them.

Through the contribution of efficient learning task feedback from me the students were able to plan, execute, monitor and assess their individual learning. Although the students preferred some co-operative learning techniques more than others, it became clear that co-operative learning and its corresponding learning task feedback contributed significantly to the generation of an increasing number and quality of ideas for resolving each individual's real-life challenge. Unfortunately the students were still unfamiliar with co-operative learning and all did not go as expected because some groups did not participate according to the requirements of the corresponding co-operative learning technique.

The co-operative learning was concluded with group consultations when the group needed to consult me. Each student had to present their final idea during these group consultations, while I and the other students critically assessed the owner's work (learning). The students were keen to participate and exhibit their projects. Participation was good, but the critical assessment level still needed improvement because it was the good projects and presentations that received the most comments.

After the edutainment in the third-year Illustration class I asked the professional graphic designer/illustrator to facilitate the learning task feedback.

Learning task consolidation should flow directly from the group consultations. Thus, the students had to share what they had learnt up to this point in the form of class presentations. These presentations were peer assessed with the help of stickers.

The peers had to critically assess the projects up to a certain point as presented to the class. They also had to make suggestions on how the project could be improved. Stickers with different facial expressions were made available to assist in the assessment process. After each discussion the class had to decide on a suitable sticker that justified that student's progress up to

that point. These stickers acted as vital and valuable learning task consolidation, indicating the learning quality that had been achieved.

The submission of the final projects in all the classes followed a week later. However, the third-year General Drawing students presented their final projects to the rest of the class as well as to a lecturing colleague. I built a runway in the middle of the class for this learning task consolidation. The students had to wear their shoes and “model” them to the rest of the class.

It was encouraging to notice that this project, perhaps the most challenging of the learning tasks, due to the transformation of shoes to carry the message of each individual’s purpose in life, turned out to be the one most enjoyed and also the most inspiring one. This was evident through the students’ exhibition, which was done with a great deal of pride.

Formal assessment formed part of this process and the students were given immediate feedback on the learning task.

4.5.5 Reflect

As in the previous cycle, the reflection on this cycle follows quite logically from the preceding paragraphs, and in particular the “Observe” step in this action research cycle. In this reflection I therefore will again only highlight reflections on the most significant observations that were made – this cycle has been a very significant one in that regard.

The learning tasks were designed as real-life challenges. Even though they were not real-life challenges in the true sense of the word (they were not actual requests from actual “clients” and the products were not produced and used for the purposes “intended”), there is no doubt that these learning tasks made an impact on the students on a personal level. First, the learning tasks exposed the students to what was actually taking place in the world around

them, to which many were apparently oblivious. Even though some of them might have been aware of these real-life events, like the tsunami in Japan, the learning tasks confronted them personally and they were compelled to take note. Not only that, but they were confronted to become involved in the event and its consequences. But most of all, this confrontation was a personal one: they were being challenged with something that they needed to do, that they had never done before, and for which they were not going to be taught how to do it or what to use to do it – they needed to resolve the challenge on their own. This created personal uncertainty within them, which became clear when most of them indicated in one or another that they could not resolve these challenges. These learning tasks, therefore - even though not purely real-life - succeeded exceptionally well in creating the foundation for authentic learning: an uncertainty regarding their competence to resolve the challenge ignited their emotions, which directly challenged their authenticity. Secondly, some of the learning tasks, in their character and content, were highly emotional, and this added to a personal emotional disequilibrium of at least empathy, but obviously, for many students, despair and even helplessness. Many students even expressed their discomfort and lack of confidence to contribute in resolving the various situations. However, since they experienced this discomfort and uncertainty personally, they were compelled to resolve them personally.

It became clear that something had changed in a general sense in almost all the students' personal demeanour. There was an obvious turn to some kind of "quiet inwardness" that I had not detected in the students before. It was also evident when I gave each of the students a pair of shoes as the canvas on which they needed to represent their ultimate purpose in life and wear it "on their feet". From my side it was an intuitive gesture, simply because I love my work and the students I work with. Although other students in the other groups did not get shoes, the remarks or comments from them did not reveal animosity or unhappiness, but rather an appreciation for the entire idea. One should obviously be exceptionally careful when doing something like this because it carries a risk if you do not know your students well. I knew my

students well and I was very fortunate. Another outstanding event that contributed to the transformation I experienced happened when the student diagnosed with cancer shared her story with the other students, indicating that, as human beings, we share many things than we ever imagine.

Although this kind of transformation is what I wished for, I was surprised that it came along so relatively quickly and at the intensity it was expressed.

The actual transformation that was most exciting was when the students engaged in resolving the challenges after initially expressing incompetence to resolve them. What was apparently pivotal to the students accomplishing this was the insistence that they should work on the challenge individually first through metalearning. Since they could not rely on external assistance from the lecturer, peers or teaching during this metalearning to get rid of their discomfort and uncertainty, the only way out was for the individual to use the emotional energy caused by the discomfort and uncertainty to resolve the challenge. When the individual students had constructed a contribution as a solution to the challenge, the co-operative learning became as successful as it was. Many different kinds of co-operative learning techniques were utilised and some techniques were preferred and experienced as “better” than others. It seemed to be a secondary “nice to have” in relation to the primary realisation that the many contributions of each individual in the co-operative learning group were much more powerful in resolving challenges in the best possible way. What was encouraging was the pride that each individual had in their work and that the same pride was transferred to a higher level with the group consultations, when the groups exhibited their communal pride.

Learning task feedback remains a challenging facilitating learning function for me. What remains first and foremost in my mind with learning task feedback is that I need to be exceptionally aware of what is going on around me and to respond to whatever transpires through the appropriate questions, and in this I have succeeded with increasing success. However,

during this cycle I realised not only how important learning task feedback is, but that astonishing transformation can ensue if it is executed well.

One of the most telling transformations was noticed during the learning task consolidations in the format of group consultations. The individual student took much personal pride in their accomplishments – this was exceptional in the personal life purpose the students had to represent on their shoes. This should come as no surprise, since many of the students had never thought of such a crucial driving force in their lives before. What really impressed me was the level of participation and the intensity of each individual (personal) in order to support the group’s accomplishments.

The interviews with the different participants in the first cycle produced results that sufficiently informed at least the second cycle. Repeating the interviews as closing interviews in each cycle as a triangulation instrument seemed a valuable decision at that point in time. However, I became increasingly disillusioned with the results of the “closing interviews”, which contained the same questions as the interviews in the first cycle. This was mainly because of the insignificance of the responses to some questions, as well as unsatisfactory repetitions of some of the responses to certain questions from the interviews in the first cycle and the previous closing interviews. It became increasingly difficult to make meaningful distinctions between items and to eventually draw significant conclusions. This required considerable reflection.

Regarding the responses to the interviews in the first cycle, meaningful results did ensue. It was especially with the results of the “closing interviews” that my disillusion grew. Regarding the responses to the dominant teaching methods, the students could only basically respond to what they were confronted with in that cycle and dominance could not really be determined. In addition, the students were not familiar with many of the teaching methods; neither did they necessarily know the labels of the different methods. It was this unfortunate lack of knowledge that caused the

interpretations of students' responses to be problematic. Even if a preferred "teaching method" was identified, none of these were really pure teaching methods, but rather "teaching techniques". These "techniques" did not determine the acquisition of essential human qualities. However, it was the required human quality of resourcefulness, for instance, that would compel the students to explore, find, access, become acquainted with, exercise, select, and utilise the best possible techniques that resulted in the solution of the real-life challenge. In the context of this research, the "teaching method" is facilitating learning – which is, for all practical purposes, an "anti-teaching" method but a pro-learning paradigm.

What was encouraging, however, was that the students' responses regarding their preparedness for their career were overwhelmingly positive. This result is strengthened by the confirmation of these responses from students who already had professional graphic design experience. However, these responses could not be correlated with teaching methods – again for the reasons indicated above. Also, feedback from other graphic design lecturers indicated a continued increase in the quality of the students' behaviour and their products.

The responses of the students regarding the description of their ideal world were particularly disappointing regarding the extent of their descriptions and the repetition of previous cycles' descriptions.

What had become increasingly stronger regarding the role of the graphic designer in creating an ideal world was exceptionally encouraging and convincing. This was revealed by the interviews and confirmed by students' personal products and their personal pride accompanying it.

It was obvious from the interviews that the students required the essential personal quality of maximising human potential and this was confirmed by the way in which they went about resolving the real-life challenges. However, the qualities that have been acquired were subject to what students were

confronted with and familiar with. Thus, many different human qualities were mentioned, but the question remained: which of these may be regarded as essential or fundamental.

The students were insistent that their experiences during this cycle had drastically changed their views on and interpretation of the complex reality of the world and what they as individuals could do to enhance quality of life. Thus, the comment that graphic designers have to be role models is encouraging for a life enhancing profession.

4.5.6 Review

From the reflection in the previous paragraphs it became clear that this cycle led to a significant personal transformation in most of the students. It was obvious that the students did acquire at least some of the intrapersonal qualities to varying degrees. Slabbert, De Kock and Hattingh (2009:CD-ROM) indicate the following hierarchical order of intrapersonal qualities to be acquired: Self-confidence - I can; intrinsic motivation - I want to; initiative - I start it; effort -I work hard; perseverance - I finish; resilience - I find a way to recover; common sense - I know; integrity - I do the right thing everywhere and all the time; independence - I do it myself and I do not depend on you; joy - I enjoy; love - I care. Students were also challenged by interdependent co-operation during co-operative learning, since each individual's contribution has been challenged to improve its quality of learning. Although not as obvious as the acquisition of the intrapersonal qualities, there was evidence of the acquisition of some of the interpersonal qualities by some students to varying degrees. Slabbert, De Kock and Hattingh (2009:CD-ROM) indicate the following hierarchical order of interpersonal qualities to be acquired: Humanisation - I see you in the same way as I see me; communication - I interact with you in the same way as I want you to interact with me; dealing with feelings - I resolve my own feelings without involving you; justice - I indicate to you where you may have acted inappropriately and I appreciate it

when you return the favour in order for both of us to learn and improve ourselves; forgiveness - I indicate to you if you have acted inappropriately, but I forgive you for the sake of an improved mutual relationship; I love in an agape way - I extend myself for the purpose of nurturing our mutual holistic growth.

I was encouraged by the improvement of my facilitating learning practice. However, the most important function of learning task feedback required my enhanced vigilance in order to align my responses to learner actions.

In addition, it became evident that this cycle has also, besides personal qualities, indicated that another set of qualities is essential. The “role model” aspect, which can be translated into leadership and a subsequent change agent, has become a prominent feature.

What was also revealed was that many aspects that initially were regarded as crucial for this research revealed not to be as essential as predicted, most probably because of my own incomplete transition from the more traditional teaching methods, strategies and techniques to a full-blown facilitating learning practice. This transition has to be eliminated as far as possible in the next cycle.

Thus, in order to challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life, in the next cycle of the action intervention I focused on the acquisition of the leadership quality of an enlightened change agent – which will be abbreviated to simply “leadership qualities” in most of the text with exceptions where the elaboration is more appropriate.

4.6 **Cycle 5: Improving my educational practices to ensure the acquisition of the essential leadership quality of an enlightened change agent**

The results from cycle four of the action intervention directed my attention to the essential leadership qualities of an enlightened change agent for this last cycle of my action research. The following steps were followed in this cycle:

Cycle 5: Action research steps

- **Identify:** Improving my educational practices in order to challenge graphic design students to acquire the essential leadership qualities of an enlightened change agent.
- **Plan:** Designing challenging real-life learning tasks that demand the execution and expression of such leadership qualities by graphic design students and facilitating the learning process to ensure the highest possible learning quality. Through facilitating that learning process I will focus on the leadership qualities of an enlightened change agent within a facilitating learning context. Reflective journal entries. Interviews with students in graphic design.
- **Action:** Presenting the learning tasks, having the learners execute them and facilitating the learning process to ensure the highest possible learning quality. Note taking in a reflective journal. Execution of interviews.
- **Observe:** Observing my own process of facilitating learning as well as the execution of the learning task by the students and analysing the reflective journal and interview data.

- **Reflect:** Reflecting on the data collected through the process of facilitating learning, the reflective journal and the interviews.
- **Review:** In terms of the facilitating learning process in order to ensure the acquisition of the leadership qualities of an enlightened change agent at the highest possible level of learning quality, the data recorded in the reflective journal and the interviews, what kind of intervention would be necessary to cause an improvement in my educational practices that would challenge my graphic design students to acquire other human qualities that are essential for a career that enhances quality of life?

4.6.1 Identify

In the review of the previous cycle, the set of qualities that needed to be acquired by graphic design students was the leadership quality of an enlightened change agent. It was the valuable work of Mezirow (2000) and Kitchenbaum (2008) that again provided the learning quality construct that acted as the foundation of this action research cycle. In addition to informative learning and formative learning levels, Mezirow (2000) and Kitchenbaum (2008) have also added a third level of learning, namely transformative learning. Transformative learning is about developing leadership attributes and its purpose is to produce enlightened change agents. There is therefore no doubt that the learning that will produce leadership and subsequent enlightened change agents will require a new *qualitative* transformation (Engeström, 2004) of the human being, as Barnett (2007:102) also indicates regarding the subsequent necessity for the acquisition of dispositions and qualities. The acquisition of the leadership quality of an enlightened change agent was therefore, the focus of the next action research cycle.

Fortunately, facilitating learning is designed to achieve this feat.

In addition, the closing interviews were radically re-designed in order to provide valuable results, which would inform the answer to the research question.

4.6.2 Plan

The planning step in this action research cycle was exactly the same as in cycle two.

4.6.2.1 The learning task design

I designed four challenging learning tasks, one for each student group. It has to be emphasised that designing these learning tasks and formulating the real-life challenge may seem to be a matter of simplicity. In fact, the process of finding a real-life challenge requires a huge amount of research effort. However, formulating the real-life challenge is of crucial importance. It was the formulation of this challenge that would determine whether personal transformation of the highest possible order would be achieved. The real-life challenges that follow are the epitome of the formulation of a real-life challenge. They started off with an initial formulation – as with all the other real-life challenges formulated in this research – and went through several alterations. Even the “final” formulation that appears here was altered during its presentation, because the learning task determines the nature, structure and intensity with which one needs to facilitate the learning to achieve the desired outcomes.

a. General Drawing II (Alphabetic landscape)

Choose the social ill in our country that according to you is the most important and urgent to cure to ensure the well-being of our society at

large. Design the most appropriate and most cost-effective alphabetical landscape through which you will ensure as best you possibly can that your social ill be cured as soon as possible. You need to convince your peers with a comprehensive visual interrelated overview that your social ill and the way in which you propose to cure it is the most urgent and important one amongst those chosen by the individuals in your co-operative learning group.

b. Illustration II (Pictorial symbols)

The Department of Arts and Culture is the custodian of South Africa's diverse cultural, artistic and linguistic heritage. Investing in Culture is the department's flagship programme to eradicate poverty, providing the necessary skills to enable people to assume greater responsibility for their future. The Investing in Culture Programme aims to provide access to skills and markets as a tool for urban regeneration, rural development and job creation. Since 2005, through this programme, the Department of Arts and Culture has funded and supported 394 projects totalling R200 million. The programme created 7 374 jobs and training opportunities, of whom 45% of the beneficiaries were women, 39% youth and 4% were people with disabilities. Three of the department's Investing in Culture projects have won the Sowetan-Old Mutual Community Builder of the Year Awards. These projects are the Ndhengeza Xizambani Community Project, the Kopanang Community Project and the Tinghwazi Arts and Crafts, based in rural communities in the Mopani District Municipality, Limpopo. Other initiatives include:

- a. Indigenous Music and Oral History project*
- b. Heritage Month celebrations*
- c. Mosadi wa Konokono (Woman of Substance)*
- d. Youth in arts*
- e. Artists in School project*
- f. Art in Correctional Facilities programme*

Provide the Department of Arts and Culture with the best possible pictorial symbols that will most effectively promote the planned workshops on instrument making and playing within the Indigenous Music and Oral History project.

c. General Drawing II (Character development)

Adolescence is characterised by a wide variety of socio-emotional challenges, of which the most difficult to handle is the adolescent's individual internal turmoil to find their personal identity as it comes into conflict with existing social norms. Each age group, however (years 9-11; 12-14; 15-18), is struggling with a characteristically different problem. This stage in the adolescent's life is crucial in developing character – and in particular within the societal context this refers to moral character. Each of you will be allocated an adolescent year group. You need to convince your peers through a comprehensive visual interrelated overview that the character that you have developed through any drawing medium in the form of an A3 Charasheet is the best one. You must convince them that this character will inspire and compel adolescents to develop the required moral character associated with their age group's challenges. The aim is that the best character for each age group will be selected and presented to our most proximate school. This must accompany them through that challenging adolescent journey by using your own experiences to ensure an adolescent society with a healthy moral character.

d. General Drawing (Drawing and photo fusion)

Woolworths as a company is extremely aware of the impact their business has on the environment, societies and individuals. They work extremely hard, first of all not to do any damage, and secondly to use as few

resources as possible. Here are some of the projects that they are involved in:

- a. Farming for the future*
- b. Recycling*
- c. Packaging*
- d. Use of precious resources*
- e. Protecting plants and animals*
- f. Limiting the impact of what they do*

Convince Woolworths that they need a better recyclable shopping bag and one that is even more cost effective and environmentally friendly than the current one bearing the farming for the future project in mind. Preparing an A3 digital illustration in the form of drawing and photo fusion, of your proposed recyclable shopping bag. Your presentation to Woolworths has to be accompanied by a comprehensive visual interrelated overview of your evidence. Your peers have to approve your presentation because only one presentation will be selected for the presentation to Woolworths.

It should be obvious that these learning tasks to acquire essential leadership qualities were exceptionally challenging for the students. Considerable research had to be done to just understand what the challenge would involve. The phrase “comprehensive visual interrelated overview” represents a concept map of which the concepts are represented visually. The phrase “you need to convince” refers to the challenge to acquire leadership qualities, but even if another “best” one was chosen the learning tasks require the acquisition of principle-centred leadership (Covey, 1993) and the powerful value of servant leadership (Freeman, 2011). These forms of leadership place the leader in an enlightened leadership role, even in the service of another leader. The acquisition of these forms was possible through engaging with,

exploring, constructing and expressing the leadership quality of an enlightened change agent, which are incorporated in these learning tasks.

4.6.3 Action

All the learning tasks were appropriately presented in verbal and written format.

The learning task presentations went smoothly from my side. However, although the students were excited about the real-life challenges, it became apparent that they experienced some discomfort, most probably because these were the toughest challenges that they had been confronted with and also because of the variety of dimensions the challenges addressed.

4.6.4 Observe

This step in the action research cycle in this research contains the observation of the learners' learning task execution through authentic learning, metalearning and co-operative learning, and my learning task feedback and consolidation as well as associated action research actions.

4.6.4.1 The learning task execution through authentic learning, metalearning and co-operative learning

All the challenges of the learning tasks were designed to immerse the students in a real-life experience as the starting point of authentic learning, as well as the subsequent reflection on a real-life experience, the construction of what has been learned through resolving a real-life experience and consequently igniting the desire to explore a new real-life experience.

Students were excited about being challenged with these real-life challenges, but there was a hesitation in getting started – as if they did not know what to do. They were clearly immersed in a real-life experience as the start of authentic learning.

a. Learning task execution through metalearning

The real-life challenges compelled students to engage in metalearning through the challenge that “you – each individual student – need to convince”. Since these learning tasks were exceptionally challenging in that they required a substantial amount of research to be done before they could start resolving the real-life challenge, the metalearning strategy had to be explored in depth. The subsequent metalearning strategies had to be equally well executed, especially because the students had to convince their peers that their efforts were “the best”. The learning tasks compelled the students to discover, explore and utilise the values of concept mapping through the phrase, “through a comprehensive visual interrelated overview”.

I observed that students realised that they had to engage in the planning strategy of metalearning to enable them to execute the learning task. Even though they initially struggled to execute the learning task, when they discovered the value of concept mapping they became quite excited again when this supported them in obtaining a clear perspective of what the learning task actually entailed. This inspired the students to continue with the execution of the learning task. But because the learning task was really challenging in itself as well as the added design requirements, the students spontaneously engaged in smaller and larger debates of varying intensities from time to time. These debates clarified matters and ensured an efficient progression of resolving the real-life challenge – even though co-operative learning was not yet anticipated.

b. Learning task execution through co-operative learning

Regarding co-operative learning, the students were compelled to engage in co-operative learning because they had to share one another's work in order to determine whose work was the best. Much personal involvement and interaction ensued, as each student's work was scrutinised intensively. In addition, everyone needed to co-operate in resolving the real-life challenge. Some students inevitably had to fulfil leadership roles, while others served the people they needed to help as well as their peer who was the leader. However, within any particular instant the students might need to interchange their roles – as the needs of the people (peers, public, corporate, institutions) are transformed to serve or to be served.

Co-operative learning, therefore, was evoked more spontaneously. Because it acted to increase idea generation, an increased flow of individual idea generation was stimulated, which students shared with the co-operative learning groups and their variations. It was obvious that there was an increase in individual and co-operative participation and enthusiasm, with a subsequent increase in the quality of the work produced.

What was truly significant is that the students enquired about how I knew so much about the generation of ideas and they wanted to know where they could obtain more of these techniques: a clear indication of the establishment of the fundamental disposition of a will to learn and the acquisition of the essential quality of resourcefulness. But even more profoundly, it indicates the acquisition of the essential quality of leadership: the student realised that, in order to be the best – to become a leader in graphic design – they needed to become the most resourceful. There was a general aspiration to increase the quality of their products, providing an indication that leadership might be taken.

4.6.4.2 Learning task feedback and consolidation, as well as associated action research actions

It has become evident through this research that learning task feedback cannot be planned. It is completely dependent upon the actions of the students. However, since the real-life challenges were formulated in such a way as to clearly compel the students to engage in certain metalearning and co-operative learning actions, the learning task feedback became something that could at least be anticipated and executed more efficiently. I continually tried to visualise the entire learning process and when and where I could anticipate what, so that my vigilance was sharpened when my anticipation was aligned with reality. Unfortunately, not everything can be anticipated and this required from me the best possible intervention within an instant and for this I had to increasingly access and trust my intuition, as it is sourced from my spiritual intelligence (spirit) (Zohar & Marshall, 2004:3), which guides my emotional (soul), mental (mind) and physical (body) intelligence (Dimitrov, 2003; De Quincey, 2005:221-243). It demanded from me to increasingly transform into my authentic self, creating the world we want to live in and the kind of student and subsequent human beings who “are appropriate, indeed, called for, in a contemporary world ... This philosophical perspective ... is crucial to get to grips with what it means to *be* a student in the contemporary world” (Barnett, 2007:3), and subsequently what it means to *be* a lecturer in the contemporary world.

The consolidation of the learning task took the same form as that of the previous cycle in that it revolved around co-operative learning groups presenting their projects to the class and being peer assessed thoroughly during that process. However, this peer assessment of the products before they were finally submitted turned out to be more difficult than I anticipated. The students were generally willing to make an assessment placing the product into a broad category (poor, sufficient, good). However, they were reluctant to add comments on why their assessment indicated the results it did. In direct opposition to the process while they were busy generating ideas

for the final products, some students were reluctant to expose their ideas to the rest of the class. If they did, their peers were reluctant to make comments and suggestions for improvement. When I asked them why they were so apprehensive, the students said that they are afraid that other students would “steal” their ideas.

After a short, but powerful, intervention from my side through which the students realised that sharing and having their work peer assessed only had the purpose of reciprocal improvement of their work, which cannot be done through “stealing” another one’s idea, the students seemed to exhibit a change in attitude. When the students were called to submit their final products, the change in attitude was confirmed when they shared their work with their peers. This ignited energetic discussions between them and they exhibited pride in what they had produced.

The students could not wait for the results of the assessment of their products, of which they obviously were very proud.

4.6.5 Reflect

As in the previous cycle, the reflection on this cycle followed quite logically from the preceding paragraphs, and in particular from the “Observe” step in this action research cycle. In this reflection I again only highlight reflections on the most significant observations that were made.

The learning tasks in this cycle and the formulation of the real-life challenges were the most comprehensive, complex and well formulated towards the achievement of the learning task purpose to date. However, although the real-life challenges were real-life challenges in the true sense of the word, for a number of reasons they could not be completed by the students to their full consequences. This was one of the most unfortunate aspects of this research process, because the value of facilitating authentic lifelong learning was

situated in the solution of a real-life challenge to its fullest. In fact, the actual acquisition of the essential qualities – in this case the change agent quality of servant leadership – at their highest possible level is jeopardised if this does not happen. The one real-life challenge and its learning task presentation that had, if it was taken through to its full consequences by presenting it to a school, the potential to have an enormous, direct and valuable social impact on a large community (the graphic design students and all the adolescents in a particular school) was the character development learning task. It was a pity that I did not ensure that this could be achieved.

The learning task presentation through the real-life challenge went smoothly for me because of the clarity of the formulation. The complexity and comprehensiveness made immediate grasping of the entire challenge and its consequences difficult for the students – but then again, real-life for the graphic designer and dealing with clients is characteristically comprehensive and complex.

Initially, the students had difficulty executing the learning tasks, but it became easier when they realised that they had to start with planning as the metalearning strategy in the learning task execution. Once they had done this, they generally enjoyed the challenges of metalearning and its accompanying concept mapping, and even spontaneously moved to co-operative learning through particular co-operative learning techniques when the execution of the learning task remained difficult.

Learning task feedback was challenging because the learning tasks were comprehensive and complex. It did, however, become easier to execute as my own personal development of all the intelligence domains increased: physical, mental, emotional and spiritual. This was achieved by my immersion in my real-life experience of facilitating the learning of my students. I needed to get in touch with my intuition and learn to trust it, especially in instances when the challenges facing both sides revealed that “certainty is beyond the grasp of finite hearts and minds” (Palmer,

1998:104). It was then that I needed to access the transcendent dimension of my spiritual intelligence beyond my finite heart and mind to provide me with the wisdom I needed as an appropriate learning task feedback response (Zohar & Marshall, 2004).

What was particularly disappointing was the reluctance of some students to participate fully in learning task consolidation through critical assessment of one another's work. It was their expression of fear that others would "steal" their ideas that was disturbing.

The closing interviews revealed that the students found this new way of teaching strange and sometimes difficult – especially because there was no teaching and their questions were not being answered. At the same time, they appreciated the high level of participation that was required as individuals and the interaction in groups. They referred to the fact that they were learning a lot about the subject, creativity, professionalism, life and themselves. They found the real-life challenges difficult, but resolving them prepared them well for their career.

It was clear that the real-life challenges made the students aware that the leadership quality of an enlightened change agent is essential for graphic designers. Although some students showed that they had acquired leadership qualities during this cycle, it was to varying degrees and not as comprehensive as what I had anticipated.

4.6.6 Review

This cycle was intended to have the students acquire the essential leadership quality of an enlightened change agent. It was evident that the students became aware of the importance of this quality and that some of them acquired some associated qualities. However, it was evident that the acquisition of this set of qualities may be more involved than other qualities,

most probably because they could only be acquired interdependently: decisions on when it was appropriate to take on the leadership role and when to allow someone else to take it on amongst a group of “equals” (same students in one class) were therefore quite daunting.

Acquiring essential leadership qualities may, therefore, need more time and much more intensive facilitating learning processes than expected. Another major flaw in securing what was intended was the fact that the real-life challenges were not carried through to accomplish their full consequences. It unfortunately is only in fulfilling those subsequent demands as final solution to the real-life challenge that the true value of a real-life challenge is manifested. This could have been confirmed to be correct when the students’ concern about others “stealing” their ideas was eliminated and when the full consequences of a real-life challenge had been followed through. I am convinced that this would have been the case if it were also accompanied with appropriate facilitating learning practices.

4.7 Recapitulation of comments

This chapter describes the empirical part of the research, as well as the results thereof, with specific attention being paid to the improvement of my educational practices. The adoption of facilitating learning as my educational practice seems to have been successful in the students’ acquisition of the human qualities that are essential for a graphic designer to have a career that enhances quality of life.

The facilitating learning educational practice, by its nature, confronted the students with real-life challenges that had to be resolved. Not being taught how to do this, the students were compelled through facilitating learning to explore the graphic design landscape in order to find, investigate, experiment with, experience, select, combine, utilise and even create their best method, strategy or technique. This exploration could answer the demanding

challenges of the design requirements in order to produce solutions for a real-life graphic design challenge.

The following four sets of essential qualities that graphic designers should possess to enhance their employability and to be in demand because they practise a career that enhances quality of life were identified and were acquired by the students to a greater or lesser extent:

- Artistic quality of creativity.
- Professional quality of increasing individual creative expertise in a co-operative/collaborative value based community of graphic design practice.
- Personal quality of maximising human potential.
- Leadership quality of an enlightened change agent.

If these four essential qualities that a graphic designer should possess to enhance quality of life are acquired through the educational practice of facilitating learning, as it became apparent through this research, then graphic design education is on a winning journey.

Chapter 5 concentrates on the conclusions and recommendations of this research study.

chapter 5

Conclusions and Recommendations

5.1 Introduction

This research was prompted by the realisation that my current educational practices – although I have been practicing them for many years and they do not differ much from what my colleagues inside and outside my institution are doing – might not suffice in aiding my graphic design students in acquiring not only the necessary knowledge and skills, but also the human qualities that are essential to “do good (design)”, to realise their capability as graphic designers to change the world for better or for worse (Berman, 2009).

I engaged in this research to ascertain whether I can ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for employability and for being in high demand for a career that is capable of enhancing the quality of life of society at large.

This chapter aims at drawing the associated conclusions regarding the above purpose, as well as making the necessary recommendations for future research.

5.2 Conclusions regarding the action research cycles

Since this was a participatory action research study, I feel it is appropriate to structure my conclusions according to the cycles of the action research.

5.2.1 Conclusions: Exploring the current graphic design education and professional landscape

The proposed exploration of the current graphic design education and professional landscape was accomplished through semi-structured interviews with the primary stakeholders in graphic design education. These included the following participants:

- Second- and third-year graphic design students in General Drawing (II and III) and Illustration (II and III).
- Graphic design lecturers.
- Professional graphic designers.

The exploration of the current graphic design education and professional landscape was not intended to be exhaustive. The aim rather was, firstly, to establish what the current generally accepted essential human qualities were that a graphic designer should possess. Secondly, to ascertain the current dominant graphic design educational practices that assumingly need to be employed to acquire the essential human qualities. Thirdly, this exploration was intended to fulfil the role of the graphic designer as a change agent towards the enhancement of the quality of life of the community at large. Although personal, unforeseen circumstances forced me to reduce the intended number of participants in the sample, the principle of purposive convenient sampling was maintained so that the aim and function of the interviews were not compromised.

In addition, many of the participants, although few in number, had interchangeable roles: most graphic design lecturers had been graphic design students at some institution of higher education. Most of them had left their graphic design education to join a graphic design practice of some or other kind and, finally, most graphic design lecturers had left graphic design practices to join a higher education institution as graphic design lecturer. What was most valuable in this research were the graphic design students who had been involved in forms of graphic design professional practice. These students had firsthand experience of current graphic design educational practices as well as of the challenging professional graphic design career for which they were being educated.

The following questions were formulated to be asked during the semi-structured interviews in the first cycle with all the participants mentioned earlier:

- a. What different teaching methods have you experienced in the graphic design course and identify those that were the most prevalent?
- b. Which of these teaching methods did you prefer and why?
- c. How well do you feel you are being prepared to enter a career in graphic design?
- d. How would you describe the ideal world that you would want to live in?
- e. What would you say your role is as a graphic designer in creating such an ideal world?
- f. What would you say are the essential qualities a graphic designer needs to possess to achieve such an ideal world?

The conclusions arrived at from the semi-structured interviews with the graphic design students, lecturers in graphic design and professional graphic designers are discussed in the following paragraphs.

5.2.1.1 Most dominant and preferred teaching method

From the responses to the question regarding the most prevalent and most preferred teaching method, the following could be concluded as a generally accepted prevalent and preferred teaching method. There are obviously slight variations in particulars and in order of execution:

- One or more artistic methods and/or techniques are taught (theoretical) with or without visual assistance in the form of a real example (theoretical) – with interaction.
- The method(s) and/or technique(s) are demonstrated.
- Experimentation with methods and/or techniques.
- A form of assignment (project) is given with specification of the design and/or presentation requirements to apply theory in practice. (If the design and/or the presentation requirements require additional and separate teaching and/or demonstration from the associated artistic methods and/or techniques this will apparently ensue during this step.)
- The assignment is executed and help will be provided to complete it successfully.
- The assignment is submitted and assessed in private.

5.2.1.2 Preparedness for career

Regarding the question of preparedness for a graphic design career, initially, most students were satisfied with their level of preparedness, although a small number were dissatisfied. All the graphic design lecturers believed that they were doing a good job in preparing graphic design students for their careers. They were convinced that their responsibility towards the students lay beyond only teaching knowledge and skills, and included the acquisition of important life skills. Surprisingly, only one of the professional graphic designers felt that he was well prepared for the industry, whilst the others revealed that they were not at all well prepared.

The difference in the views of graphic design students and lecturers regarding the preparation of students for their career and those of the professional graphic designers is significant. This could be attributed to the complexity of the industry, to which the students are obviously not being exposed. Education has to find a way to bridge this gap.

However, what is most significant regarding the response to the question of preparedness for their career as the cycles of action research progressed is that the students experienced increasingly that they were being well prepared for their career as professional graphic designers through my improved education practice. This response met overwhelming levels at the end of the research. The significance of such a response is increased when it is again considered that the participants either had professional graphic design experiences or were currently involved in the professional graphic design industry in some or other way.

5.2.1.3 Your view of the ideal world in which quality of life is enhanced

The responses to this question varied slightly between the graphic design students, the lecturers and the professionals. The most common

characteristics that were evident from in response to what would constitute such an ideal world were: peace in all its variations, equality in all its variations, a world devoid of poverty and its consequences, living and working in harmony, the opportunity to maximise one's potential, and a relaxing, colourful, exciting and creative world of quality.

It would have been quite strange if anyone desired a world different from the one characterised above. It should be obvious that such a world has not been accomplished – yet. The accomplishment of this kind of world will require sacrifice and immense effort. Education will need to exploit the infinite power (potential) with which human beings are endowed. This is the challenge in graphic design education if we are to create a safe, sustainable and prosperous future for all.

5.2.1.4 Role of graphic designer to create an ideal world

Some of the graphic design students were quite surprised at this question, because they did not realise that their work might have such an impact on the world in which they are living. Most of the students, however, realised that their visual communication had no other purpose besides influencing people. In this regard, they indicated that they realised that they could contribute to creating an ideal world.

Most of the lecturers agreed that they had a responsibility to make the students aware of their responsibility to create an ideal world. This also meant that they would sometimes need to sacrifice being paid for the work they do. What remained a big challenge was the fact that it was difficult to change students' attitudes regarding their perception of the virtually "untouchable" status of the industry. The complacency of one lecturer towards the students' decisions whether they would fulfil their responsibility or not was somewhat disturbing.

All the lecturers agreed on the role that the graphic designer should play in creating an ideal world. However, freedom of speech and human rights might hamper the fulfilment of such a responsibility. Thus, it will require courage of all involved to ensure that nothing and no one will be harmed through exercising this responsibility. At the same time, graphic designers should communicate responsibly with regards to different cultures in order to ensure essential moral and ethical values are compromised - another major challenge.

5.2.1.5 Human qualities that are essential for a graphic designer to possess

The responses to this question by the groups of participants were exceptionally wide and varied. However, and not surprisingly, the one quality that stood out was creativity. It may be concluded that the essential artistic quality a graphic designer should possess is encapsulated in creativity. Graphic design is virtually incomprehensible without creativity.

5.2.2 Conclusion: Improving my educational practices to ensure the acquisition of the essential artistic quality of creativity a graphic designer should possess

I wanted to use the introduction to this cycle to relate a major concern regarding data collection in the classroom where the students were supposed to acquire the essential human qualities. Initially I wanted to use visual data collection in these settings. However, there were some students who did not want to participate in the research and therefore the collection of visual data would have been unethical. It was also difficult to ensure anonymity with visual data, thus I was compelled not to use that format of data collection. I was disappointed because audiovisual data collection would have been far more appropriate. I thought of replacing it with audio-only data collection, but from experience with the poor quality of the audio part of

audiovisual recordings in generally “busy” classroom settings – like mine usually was – I also relinquished that possibility.

Fortunately, I had the advantage of a small and relatively close knit graphic design community at the Tshwane University of Technology who not only participated in this research project, but also, through no particular pre-arranged intention, for all practical purposes became research collaborators through their formal and informal participatory dynamics. This research cannot be regarded as a pure case study of Tshwane University of Technology because the professional graphic designers who participated in this study were from outside the institution. However, besides the valuable contribution made by the professional graphic designers who participated in the first cycle, the remainder of the participants were truly representative of the primary academic teaching and learning stakeholders of the graphic design department of the Tshwane University of Technology. This is not a large academic department and it had the undervalued asset of the already existing, good interpersonal relationships between the students and the lecturers and among the lecturers themselves. My colleagues who graded the students’ products (assignments) were not only fulfilling a watchdog role to prevent bias from my side, but their interest in the research, and their valuable feedback to the students and to me both formally and informally made them, together with the students – even those that did not participate formally in the closing interviews – true collaborators in this research through their unsolicited, spontaneous comments and feedback. Their relatively high level of participation and interaction became an advantage for this research, since the essence of this research is situated not in the students’ products, but primarily in their behaviour. They therefore provided ample data through which I was able to correlate and confirm the students’ behaviour as it related to possible essential human qualities that were explored, acquired, developed and expressed – an invaluable compensation for the absence of audiovisual data.

Returning to the conclusion of this cycle, creativity, in particular, was revealed as the essential artistic quality a graphic designer should possess. However, an exploration of the challenge to ensure the acquisition of the artistic quality of creativity, and the corresponding educational intervention that was the most dominant and preferred, seemed not to have been sufficient. The reason for this was that it contained concepts like “teaching”, “application of theory in practice”, “demonstration” and “direct/help”. Korthagen (2001:225) says, “the ‘application’ of existing knowledge ... is based on a fundamental misunderstanding about teachers and teaching”. He continues in the same vein: “[a]ny attempt to use exercises and training elements after the introduction of theory, with the aim of promoting the transfer to practice, is like starting with the walls of a house and then laying the foundation. It amounts to turning the world upside down, which Freudenthal (1991) calls an *antipedagogical* inversion” (Korthagen, 2001:200).

Qualities, however, are acquired through resolving real-life challenges, during which the student is confronted by the need to explore, construct, acquire and express. This is accomplished by facilitating learning. What is of crucial importance is that “facilitating learning is *not* teaching, *not* telling, *not* lecturing, *not* preaching, and *not* directing” (Rooth, 2000:35). Rooth further says that facilitating learning rather provides the resources and structures for students to explore, discover, construct and develop. Thus, facilitating learning required a serious mind shift in me.

Having explored the paradigm of facilitating learning, as designed by Slabbert, De Kock, and Hattingh (2009), I realised that it would take some time and effort to become accustomed to executing it. The learning task design was not that difficult, because many of the assignments I normally would have given the students were related closely to real-life challenges, and some of them could have been actual real-life challenges. However, I learnt that it was the formulation of the assignments (briefs) that was the hard part, because they had to be formulated as a challenge – demanding a

level of perfection or the highest possible quality – and not simply something to be executed and completed. In addition, it had to be clear from the real-life challenge what was expected of the students, but no information should have been provided on how it need be accomplished. The challenge therefore should contain only the parameters within which a real-life challenge should be executed in the format of a learning task – and that should be mentioned only subtly. The learning task presentation appeared not to be a problem to execute, although I challenged myself to act as a corresponding client during the presentation of the learning task.

My lack of knowledge concerning facilitating learning in practice, as well as my insecurity about engaging in something new and unfamiliar, and my reluctance to blindly accept that students can go about resolving real-life challenges by themselves caused me to seek an intermediate way. I did not want to teach students what to do and how to do it – which was a big step forward for me – but I judged that they would need some kind of help in doing so. In actual fact, I did not trust my ability to facilitate their learning in practice. I therefore designed checklists for the students to use: a planning, monitoring and assessment checklist. What I essentially did was to have the students answer the question checklists themselves, and I was only gate keeping monitoring whether they utilised the question checklists.

The checklists were a big advantage as a starting point for facilitating learning in practice. I found, however, that I continued to interfere with content knowledge questions, providing information, giving hints and sometimes blatantly showing students what to do and how to do it. It also turned out that some students did not use the question checklists or were only using sections or parts of them. It seems as if the length of the checklists – especially the planning one – was a hindrance to the students' progress rather than being an asset. I realised that the question checklists were protecting my ignorance and insecurities, and that they might have had a negative influence on the students' becoming truly independent. I had to revise this protective mechanism.

I hoped to obtain something more substantial from the closing interviews, but unfortunately nothing that could really add value transpired, other than discovering that the students found it interesting that my formal teaching was toned down by the fact that I had allowed the students to engage in explorations of sources, resources, methods and techniques, although maybe only in a relatively small way.

Even though the question checklists were not utilised according to expectations, the students did gain some advantage from them. The students were at least exposed to what should go into resolving a real-life challenge as far as its planning, execution and simultaneous monitoring and assessment are concerned. In addition, they were exposed to and exploring – as opposed to being taught – creative methods and techniques. The students might not have acquired the artistic quality of creativity to the extent I expected, but they did learn to carefully plan, execute, monitor and eventually assess their work.

This emphasis on creativity that nonetheless requires planning, monitoring and assessing, prompted me to focus the next cycle on what it might mean to be creative in a professional context.

5.2.3 Conclusion: Improving my educational practices to ensure the acquisition of the essential professional qualities a graphic designer should possess

The learning tasks that I designed all had the characteristic that a client (from another company or from their own company) is contracting the graphic design company (the class of students) to produce a design of a particular kind and fulfilling particular criteria. Everyone in the company, therefore, had the opportunity that their design might be chosen as the final product ordered by the client. It therefore posed a real-life challenge to the students allowing them to compete amongst one another as graphic designers to

produce the best product, but at the same time of working together within the company to ensure that the company would be worthy of been awarded the contract and would be in high demand from this point forward. It is important to notice that this collaboration was not necessarily absolutely clear when simply reading the challenge because of contextual circumstances. Also, I concluded that a real-life challenge is seldom defined in such a way that all “hidden” factors are exposed so that they are known from the outset. In these learning tasks the students only became aware of possible collisions between individuals working together to communally achieve the best possible goal when these actually occurred. In this regard, Claxton (1999) provides an indication of some of the major characteristics of a real-life problem as they present themselves. He says: “[p]ractical problems, in contrast, tend to (a) require problem recognition and formulation, (b) be poorly defined, (c) require information seeking, (d) have various acceptable solutions (e) be embedded in and require prior everyday experience, and (f) require motivation and personal involvement” (Claxton, 1999:32). This was accomplished because I (as lecturer) was fulfilling the role of the client presenting the real-life challenge to the company (class).

In view of my intention to improve on my educational practices regarding the learning task execution, I heeded the suggestion of De la Harpe that preparation “that frames the parameters of the creative problem” (De la Harpe, 2007:26) should be considered as a much more focused action in the analysis of a real-life challenge. I also shortened the lengthy planning, monitor and assessment question checklists, and reduced the required responses to a “yes” or “no” regarding a particular suggestion.

Professional qualities were indicated as the next set of required qualities a graphic designer needs to acquire and possess. In close association with the artistic quality of creativity, a professional graphic designer is required not only to become a creative expert, but also to engage in a continual process of increased creative expertise. Therefore, the students were continuously challenged to find as many ideas as possible to solve a real-life challenge. The

students were impressed with the wide range of ideation methods and techniques that they were challenged to explore.

In addition to these ideation expertise is a graphic design community that complies with a set of values, which identifies the profession of the graphic designer. In order to accomplish and maintain the standard of professionalism, co-operation and collaboration is fundamental amongst graphic design professionals at large, but also amongst smaller communities of practice like that of individual companies, larger or smaller groups of individuals in a company, and even as a single self employed individual. In this regard we are reminded of the words of Johnson and Johnson (1990:107): “None of us is as smart as all of us.” The students were continuously challenged to find new ways in which they could co-operate and were delighted at their exploration and implementation of so many different co-operative learning methods and techniques.

Many other professional qualities exist, but this research seemed to indicate that the professional quality of increasing individual creative expertise in an interdependent collaborative and co-operative community of practice is essential. Although the purpose of this cycle was the acquisition of this professional quality, the cycle might have created an awareness of this quality, but it was not successful in fulfilling its purpose. The main reason was that, although the learning tasks were an attempt at emulating real-life, they were instead hypothetical and, since they were not taken through to their actual consequence, the challenging demand of acquiring the professional quality of increasing individual creative expertise in an interdependent collaborative and co-operative community of practice as a graphic designer was largely forfeited.

The question checklists assisted me in learning task feedback because the learning task feedback questions that I needed to ask as facilitator of learning were actually prescriptively available to the students. However, it was questionable whether the question checklists fulfilled the purpose for which

they were intended in their shortened format. In addition, the students needed to be weaned from such question checklists to achieve the required professional independence. Therefore I decided to do without the question checklists in the next cycle.

The results of the concluding interviews at the end of each cycle – as in this one - became increasingly disappointing because they apparently did not add any value to determining success with regards to the acquisition of the professional qualities of a graphic designer. This was because the responses did not differ essentially from the sets of responses obtained from the previous cycles.

5.2.4 Conclusion: Improving my educational practices to ensure the acquisition of the essential personal quality of maximising human potential

From the previous cycle it was concluded that professional development implies personal development (Glen, 1988:97) and the very personal quality of authenticity (Barnett, 2007:102). In view of this, this cycle focused on the acquisition of the personal quality of maximising human potential. This quality is a vital one, essential for graphic design students in order to enhance quality of life.

All of the real-life challenges required the graphic designer to submit to a personal transformation. In their nature and presentation, all of the learning tasks were designed to touch each student personally. The students were touched because the learning tasks contained highly emotional issues with which to contend.

It initially was very difficult to allow the students to become engaged in executing learning tasks and to allow them to immerse themselves in authentic learning in which they needed to figure out how to resolve real-life

challenges. Once I decided to go ahead without the aid of the question checklists, I had to contend with what was available. Fortunately, the metalearning strategies – especially the planning of one’s own learning, which the students had to do as their first action – aided me in avoiding starting to teach them the “theory” that I thought they should know, and subsequently what they should do and how they should do it. Curbing my natural tendency to teach the students remained very challenging, not only during metalearning, but also during co-operative learning. However, when I realised that the learning task feedback actually amounted to asking the students what they thought they needed to know, what they thought they needed to do, and how they thought they should do it in order to achieve the best possible results, I became a little more comfortable. I also improved in not answering the students’ questions, not giving them information, and not giving them hints to resolve the challenge. Even when I had “memorised” some of the particular learning task feedback questions that one should ask, it was all still easier said than done. But, although I had many initial failures, I kept at it as best as I could and experienced improvement over time, although not to the extent that I wanted. I was really inspired by the effect of learning task feedback and the students’ capabilities of figuring things out for themselves when they were compelled to do so.

Learning task consolidation was a much easier function of facilitating learning that I could muster. It was particularly successful in the format of group consultations, where lots of interaction could take place between the students, as well as between the students and the lecturer.

The general conclusion, therefore, when starting out to execute the facilitation of learning in practice in relation to learning task design was that the formulation of a real-life challenge finally determined its nature and quality. Facilitating the students to engage in the planning strategy of metalearning had a major influence on success with subsequent learning task feedback actions. However, this was no easy matter and required a high level of vigilance, primarily not to answer students’ questions, give information or

generally direct them, but also to look and listen very carefully in order to ensure the best possible feedback to a student's response.

Although it was something that was quickly dissipating, it was obvious that the students still had an expectation that they would at least be given some "help" after the learning task had been presented. It was only after several attempts that I could exhibit perseverance in not "helping" the students, but I encouraged them with the very obvious action – which was not so blatantly obvious at the beginning – of asking them to answer their own question in the format of: "What do you think...?" or "How would you go about doing ... if there was no one around to help you?", and many other possible variations. The challenge was that these questions should not refer or relate to any content and neither should they contain short phrases or give rise to one-word answers. Their purpose was to put the student in a thinking mode for which the answer required time to consider before an answer would be forthcoming. Although the students did not like the apparent apathy of their lecturer, they started to realise that they were capable of figuring things out for themselves. They did not necessarily express this, but I noticed that they had become intrigued by the many avenues that became available in which resources for resolving their challenges could be found when I asked them, for instance, a question in the format: "Where would you look to find...?". Additionally, when they seemed to have exhausted their thought process, I followed up with: "If you still would not be able to find what you are looking for, where else would you direct your exploration towards in order to significantly improve the possibility of exposing other resources to find what you are looking for?"

It is clear that the demanding aspect of facilitating learning is not to provide learning task feedback, but to be able to construct the most appropriate and challenging learning task feedback action possible – within an instant.

This cycle was a huge success, for several reasons. First and foremost was that the real-life challenges related to real-life disasters that could have a

personal impact on the students, and which really touched them emotionally in a very traumatic way. Secondly, probably because the students started to realise that they would not be getting any “help” from my side, they initially thought they were not capable of doing anything about the situation at hand. But my success in giving rise to a significant emotional experience in the students stimulated my confidence in being increasingly able to be successful in learning task feedback. Their desire to get rid of their discomfort was great enough to react to my increased competence in learning task feedback by finding a way to resolve at least an aspect of the real-life challenge. What started off as students indicating that they could not do anything about the disasters led to them experiencing a cognitive and emotional turnabout. Their entire demeanour was transformed, leading to a type of quiet inner directedness – as if they were really delving deep into themselves to resolve the challenge. They found that it was not only possible, but that they also started to resolve the challenges spontaneously. Their quiet inwardness transformed into a confident “outwardness” when they began to resolve challenges. It was obvious that these real-life challenges represented life-changing events for the students – and a chance for me to see their transformation. The already good relationships between my students and me, as well as between my colleagues and the students, were transformed into a tangible closeness between us all.

Most of the participants in this cycle, the students (even those students who did not participate in the closing interviews) and the lecturers, were quite vocal – in a formal and informal way – making mention of the personal transformation they had experienced or the personal transformation they had witnessed. It ignited an increased level of energy in the individuals, who took pride in the products they had produced. There also was a tangible increase in commitment in all those involved, leading too much valued collaboration between them all.

This cycle was an exceptional highlight for me in this research. The acquisition of human qualities that are essential for a graphic designer was

obvious through facilitating learning. Facilitating learning is very demanding, but the most scientifically sound and most efficient professional educational practice I have ever come across, even though my competence is still in its infancy. I was astonished at what the students were capable of if they were immersed in a real-life challenge that mattered to them – their capabilities as human beings had been grossly underestimated. The students did indeed acquire the personal quality of maximising their human potential to a degree that surprised me.

5.2.5 Conclusion: Improving my educational practices to ensure the acquisition of the essential leadership quality of a lightened change agent that a graphic designer should possess

In view of the highlight produced in the previous cycle, the conclusions in this final cycle are mostly a repetition and confirmation of the conclusions of the previous cycle.

The real-life challenges that were designed for this cycle were the most comprehensive, complex and well-formulated for the achievement of the purpose up to date, namely the acquisition of the essential leadership quality of an enlightened change agent.

The successful formulation of the real-life challenges contributed much to a more successful learning task execution by the students and the learning task feedback and consolidation that I facilitated. However, one major deficiency remained: the designed learning tasks had not been taken through to their full consequences. If this had been accomplished, the acquisition of the essential leadership quality of an enlightened change agent would have been more immanent and obvious.

5.2.6 A final conclusion regarding the acquisition of essential human qualities

Of course, one cannot walk away from this exciting research without a little disillusionment: in spite of the obvious progress that had been made through the action research and the tangible success of the acquisition of essential human qualities through facilitating learning, a few students became concerned about sharing their products with their peers because of a fear that the other students would steal their ideas. The highlight of the previous cycle had been tarnished by something that seemed to indicate that what I had set out to accomplish was in vain. But then I am reminded of the wise words of Palmer (1998:1), who laments the disparate opposites of what it means to be a teacher: “I am a teacher at heart, and there are moments in the classroom when I can hardly hold the joy. When my students and I discover uncharted territory to explore, when the pathway out of a thicket opens up before us, when our experience is illuminated by the lightning light of the mind – then teaching is the finest work I know. But at other moments, the classroom is so lifeless or painful or confused – and I am so powerless to do anything about it – that my claim to be a teacher seems to be a transparent sham. Then the enemy is everywhere: in those students from some alien planet, in that subject I thought I knew, and in the personal pathology that keeps me earning my living this way. What a fool I was to imagine that I had mastered this occult art. [But] When you love your work that much – and many teachers do – the only way to get out of trouble is to go deeper in. We must enter, not evade, that tangles of teaching so we can understand them better and negotiate with them with more grace, not only to guard our own spirits but also to serve our students well.”

In the final analysis, my conclusion has to indicate whether – or even more challenging – how well, the research questions have been answered. For that purpose we need to recall those research questions.

The primary research question is the following:

How can I ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

This major research question was elaborated by the following subsidiary research questions:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

Starting with the subsidiary research questions, the identification of the human qualities that are essential for a graphic design student to acquire was not as simple as initially expected. Although a few particular essential human qualities were identified in the research, they could not be characterised as essential. What had transpired, however, was the identification of four sets of essential human qualities that should be acquired, namely the artistic, the closely related professional, the individually personal, and the change agent leadership qualities. Each of these four sets of essential human qualities consists of several subsidiary qualities. These qualities and their level of essentiality could be examined in future research projects.

As one would have expected, there was not a single clearly identifiable educational practice that was dominant in current graphic design education. However, a generally accepted education process with possible minor

variations in elaboration and sequence has been constructed. This research, fortunately, could identify that such a generally accepted educational practice could be successful in teaching and the acquisition of theory, methods and techniques. However, it might seriously fail if the acquisition of essential qualities are absent, since this is not possible through teaching and learning. If we were only interested in the superficial, mechanistic operation of these essential qualities, which would be no aid for human beings living in a super-complex world with an unknown future to find their authentic selves.

It was therefore crucial to find the most appropriate and best educational intervention through which the human qualities that are essential for a graphic designer to possess for their career could be acquired and that, at the same time, enhance quality of life. I can say with confidence that my action research has indicated that the paradigm of facilitating learning provides that educational practice that has as its primary aim and focus the acquisition of fundamental human qualities (Slabbert, De Kock & Hattingh, 2009).

We can therefore conclude that the research has achieved what it set out to accomplish as the transformation that took place during the research demonstrates the acquisition of the essential human qualities. This was evident even though the implementation of facilitating learning in practice was not perfect. Despite this imperfection, the process was surprising and enlightening. The evidence of a much more sustained transformation towards a coherent entity that really cares – after the fieldwork was completed – was a two-week-long emotionally exhausting, tearful farewell between me, the students and my colleagues when I had to leave my amazing sanctuary in order to support my husband’s translocation.

5.3 Suggestions for future research

There may not be many suggestions for future research, but the suggestions that can be made might last for a lifetime of research projects. The major

suggestion for future research relates to the idea of the essential qualities. This research indicated some qualities, but failed to indicate whether they were essential. The research also indicated the possible existence of four sets or categories of essential qualities. The categories of essential qualities have to be confirmed and established through future research. In addition, the essential qualities that constitute each category have to be identified. Finally, the essentiality of all the essential qualities has to be determined. In addition to these explicit suggestions, many others flowing from them might be profitable.

The most important future research regarding the facilitating learning practice will be to explore the kinds of learning interventions necessary within the context of facilitating learning for each of the essential learning qualities.

Finally, ethical and moral considerations, and the responsibility and integrity of the graphic designer, could be included in intensive and ongoing research projects regarding the education of graphic design students.

These recommendations are not meant to be exhaustive. This list could be elaborated on with many other suggestions.

5.4 Shortcomings of the study

The following major shortcomings were identified during this study:

- This quasi case study of the Tshwane University of Technology had its advantages and provided results that are sufficient to act on. However, it may be important to expand the research to include a national and international fraternity of institutions and professionals that offer graphic design education. Fortunately, the particular circumstances of this research do not diminish the valuable results.

- In future research of this kind that is not focused primarily on the graphic design products, but rather on the processes and behaviours, the best possible effort should be made to obtain quality audio-visual data, for obvious reasons. Although the absence of audio-visual data did not necessarily impact on the results of this research, quality audio-visual data would have added qualitative trustworthiness to the project.
- The semi-structured interview questions did not produce results that were profitable for this research. The responses were limited to one or a few words and perhaps short phrases indicating dominant teaching methods, preferred teaching methods, essential qualities, etc. Unfortunately, even asking for a narrative of experiences of whatever was being investigated might not have resulted in a much more profitable data set. Utilising this kind of semi-structured questionnaire has to be reconsidered in the future and, if it is used, it at least has to be customised for each particular aspect and, in this case, for the cycle that addressed a particular essential human quality.
- Another shortcoming of this research is the unfortunate absence of visual evidence as a result of the limitations imposed because of ethical considerations as discussed in various paragraphs. Although the focus of this research was not on the (visual) graphic design products as such, but rather on the more intangible demeanour and behaviour of graphic design students, the acquisition of essential human qualities have to be reflected in some or the other way. Thus, also in their visual graphic design products. In addition, since graphic design students' demeanour and behaviour – especially the significant non-verbal behaviour – is a (audio) visual encounter, future research evolving around the acquisition of essential human qualities required for a career in graphic design should exert all possible effort to capture the most appropriate and best possible relevant audiovisual data.

- Finally, and possibly the most unfortunate deficiency in this research is that, due to various circumstances, I had not ensured that the real-life challenges were actually real-life challenges in the true sense of the word. Most were rather simulations and others that were actual real-life challenges were not taken through to their final real-life consequences. Even though the acquisition of the essential human qualities were evident under these less than perfect conditions, the opportunity for the transformation of the human being (student) was forfeited to a larger or lesser extent. This was due to the consequences of not accomplishing the actual qualitative transformation which would have resulted if the challenges had been actual and taken to their necessary conclusion. In addition, if the real-life challenges are actually challenges situated in real-life in whichever real-life context, then society in that corresponding real-life context would determine the quality of the graphic design practice. This is the epitome of quality assurance within the context of the ethical competence of moral excellence.

5.5 Conclusions

Why was the main aim with this study to ensure that graphic design students acquire the human qualities that are essential for a career that enhances quality of life?

According to Berman (2009:149), graphic designers have a powerful mechanism for manipulation in their hands. Imagine if graphic designers did not participate in the promotion of overconsumption and the uncontrolled fulfilment of greed. What if they rather used their creativity and persuasiveness to make a positive change in society?

During the first two cycles of this study I found that most of the graphic design students perceived graphic design purely as an exercise in aesthetics.

According to Berman (2009:149), people can create a fulfilling and comfortable life by surrounding themselves with beautifully designed things. However, that is only the surface of the potential good and sense of accomplishment a graphic designer can achieve through their creative skills. I therefore wanted the students to recognise their interdependence, power and influence as professional graphic designers through my teaching interventions. This was accomplished during the last few cycles of the action intervention.

Mahatma Gandhi (1869–1948) once said: “Be the change you want to see in the world” (Berman, 2009:145). Thus, by changing my teaching interventions I could be the change that I would like to see in my students and my students can then transform the world as professional graphic designers into a world that is continually enhancing the quality of life for all.

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Appendix A:

Student invitation to participate and consent form



Graphic Design Student
Tshwane University of Technology

Dear participant

REQUEST TO PARTICIPATE IN RESEARCH

I, Selma Schiller, hereby request that you participate in my research study. I am a postgraduate student at the University of Pretoria conducting a research project involving the graphic design students at Tshwane University of Technology.

Data will be collected by means of a literature study, observations and interviews. This data will assist me in my study on how I could ensure that my education practice will challenge my graphic design students to acquire the essential human qualities for a career that enhances the quality of life.

The primary research question of this study is:

- How can I ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

In order to answer the primary research question, the following questions will also be addressed:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

The strategic outcome of this study will be the implementation of various education practices in order to ensure that graphic design students acquire the essential human qualities for a career that enhances the quality of life. I will use these education practices in educating graphic design students on a day-to-day basis.

The outcomes of the study will also be published in an accredited journal. This will assist other colleagues in the field of graphic design education. A copy of the final research report will also be submitted to the TUT Dean: Faculty of the Arts for notification and/or implementation of the research findings.

In this research I will subscribe to the following ethical principles:

- Voluntary participation.

- Participants will be fully informed about the research process and purpose.
- Participation will be safe.
- Even though it is difficult to maintain anonymity when using interviews, the information will be treated confidentially.
- As a participant, you have the right to withdraw from the research at any time without reason.

Students participating in the research, through observations and interviews, will provide data that would give some insight into my education practice. During the data collection I undertake to consider the principles of respect for personal autonomy, benevolence and justice and I will also bear in mind that these ethical principles do not exist in isolation from each other. I will use good judgement and sensitivity in the application of potentially conflicting principles.

Observations will be done in class during normal lecturing time with the help of audio-visual recordings. These observations will not be any different from the normal observations done by any lecturer in class situations as part of their pedagogical responsibility. In other words it will only be my observations of students' progress during education and learning. Students who wish not to participate in the research will therefore not experience anything other than the normal class monitoring.

In this research I will conduct convenience/purposeful sampling for the interviews. The reason for using this method is to obtain rich data. Please do not feel offended or excluded if you are not selected to participate in the interview aspect of the research.

There will be five interviews with each student, to be held in my office. The duration of the interviews will be approximately one hour and complete participant anonymity will be maintained in the reporting of all study results. I will also be very sensitive in this matter because I am in a position of power as lecturer and academic assessor. In order to further protect your academic vulnerability I will not mark any assignments or projects. Lecturing colleagues will be asked to do this. Therefore participation or non-participation in the project will have no impact on your academic relationship with the researcher and it will have no impact on your teaching, learning and/or assessment in the course.

You as the participant have the right to give informed consent at any time, in terms of which data may be used for what purposes and you may also say what must be excluded from analysis.

For any enquiries related to ethical issues in the TUT context please feel free to contact the Chair: TUT Ethics Committee, Dr WA Hoffmann at (012) 382-6246/65 or e-mail hoffmannwa@tut.ac.za (Ref#: REC: Sub-Committee/2010/11/Q004).

Please take your time to decide on participating and should you then be willing to participate, please complete and sign the attached form.

Thanking you in advance for your co-operation.



Selma Schiller
Lecturer: Graphic and Interior Design
Department of Visual Communication
Tshwane University of Technology
Tel: (012) 382-6048
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Prof. J.A. Slabbert
Supervisor
Department of Humanities Education
University of Pretoria
Tel: (012) 420-2773
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CONSENT FORM

I,

(Name of Student)

Agree to participate in the mentioned research project.

Do not agree to participate in the mentioned research project.

Student's signature

Date

Thank you for your cooperation.

Selma Schiller (Researcher)

Appendix B:

Lecturer invitation to participate and consent form



Graphic Design Lecturer
Tshwane University of Technology

Dear participant

REQUEST TO PARTICIPATE IN RESEARCH

I, Selma Schiller, hereby request that you participate in my research study. I am a postgraduate student at the University of Pretoria conducting a research project involving the graphic design students at Tshwane University of Technology. Your input as lecturer in graphic design will be vital to this study.

Data will be collected by means of a literature study, observations and interviews. This data will assist me in my study on how I could ensure that my education practice will challenge my graphic design students to acquire the essential human qualities for a career that enhances the quality of life.

The primary research question of this study is:

- How can I ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

In order to answer the primary research question, the following questions will also be addressed:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

The strategic outcome of this study will be the implementation of various education practices in order to ensure that graphic design students acquire the essential human qualities for a career that enhances the quality of life. I will use these education practices in educating graphic design students on a day-to-day basis.

The outcomes of the study will also be published in an accredited journal. This will assist other colleagues in the field of graphic design education. A copy of the final research report will also be submitted to the TUT Dean: Faculty of the Arts for notification and/or implementation of the research findings.

In this research I will subscribe to the following ethical principles:

- Voluntary participation.

- Participants will be fully informed about the research process and purpose.
- Participation will be safe.
- Even though it is difficult to maintain anonymity when using interviews, the information will be treated confidentially.
- As a participant, you have the right to withdraw from the research at any time without reason.

Lecturers participating in the research, through interviews, will provide data that would give some insight into education practices. During the data collection I undertake to consider the principles of respect for personal autonomy, benevolence and justice and I will also bear in mind that these ethical principles do not exist in isolation from each other. I will use good judgement and sensitivity in the application of potentially conflicting principles.

You will be required to participate in an interview to be held in my office and the duration will be approximately one hour. Complete participant anonymity will be maintained in the reporting of all study results. I will ensure that your employment vulnerability is protected. Your participation or non-participation in the project, as well as the interview responses, will not be released or used for promotion and/or performance evaluation purposes.

You as the participant have the right to give informed consent at any time, in terms of which data may be used for what purposes and you may also say what must be excluded from analysis.

For any enquiries related to ethical issues in the TUT context please feel free to contact the Chair: TUT Ethics Committee, Dr WA Hoffmann at (012) 382-6246/65 or e-mail hoffmannwa@tut.ac.za (Ref#: REC: Sub-Committee/2010/11/Q004).

Please take your time to decide on participating and should you then be willing to participate, please complete and sign the attached form.

Thanking you in advance for your co-operation.



Selma Schiller
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CONSENT FORM

I,

(Name of Lecturer)

Agree to participate in the mentioned research project.

Do not agree to participate in the mentioned research project.

Lecturer's signature

Date

Thank you for your cooperation.

Selma Schiller (Researcher)

Appendix C:

Professional graphic designer invitation to
participate and consent form



Professional Graphic Designer

Dear participant

REQUEST TO PARTICIPATE IN RESEARCH

I, Selma Schiller, hereby request that you participate in my research study. I am a postgraduate student at the University of Pretoria conducting a research project involving the graphic design students at Tshwane University of Technology. Your input as professional graphic designer will be vital to this study.

Data will be collected by means of a literature study, observations and interviews. This data will assist me in my study on how I could ensure that my education practice will challenge my graphic design students to acquire the essential human qualities for a career that enhances the quality of life.

The primary research question of this study is:

- How can I ensure that my educational practices will challenge my graphic design students to acquire the human qualities that are essential for a career that enhances quality of life?

In order to answer the primary research question, the following questions will also be addressed:

- What are the essential human qualities a graphic design student needs to acquire?
- Which current educational practices are dominant in graphic design education?
- Which learning interventions are to be employed to ensure the acquisition of the required essential human qualities of a graphic designer?

The strategic outcome of this study will be the implementation of various education practices in order to ensure that graphic design students acquire the essential human qualities for a career that enhances the quality of life. I will use these education practices in educating graphic design students on a day-to-day basis.

The outcomes of the study will also be published in an accredited journal. This will assist other colleagues in the field of graphic design education. A copy of the final research report will also be submitted to the TUT Dean: Faculty of the Arts for notification and/or implementation of the research findings.

In this research I will subscribe to the following ethical principles:

- Voluntary participation.

- Participants will be fully informed about the research process and purpose.
- Participation will be safe.
- Even though it is difficult to maintain anonymity when using interviews, the information will be treated confidentially.
- As a participant, you have the right to withdraw from the research at any time without reason.

Graphic designers participating in the research, through interviews, will provide data that would give some insight into industry requirements. During the data collection I undertake to consider the principles of respect for personal autonomy, benevolence and justice and I will also bear in mind that these ethical principles do not exist in isolation from each other. I will use good judgement and sensitivity in the application of potentially conflicting principles.

You will be required to participate in an interview to be held in my or your office and the duration will be approximately one hour. Complete participant anonymity will be maintained in the reporting of all study results. I will ensure that your employment vulnerability is protected. Your participation or non-participation in the project, as well as the interview responses, will not be released or used for any other purposes.

You as the participant have the right to give informed consent at any time, in terms of which data may be used for what purposes and you may also say what must be excluded from analysis.

For any enquiries related to ethical issues in the TUT context please feel free to contact the Chair: TUT Ethics Committee, Dr WA Hoffmann at (012) 382-6246/65 or e-mail hoffmannwa@tut.ac.za (Ref#: REC: Sub-Committee/2010/11/Q004).

Please take your time to decide on participating and should you then be willing to participate, please complete and sign the attached form.

Thanking you in advance for your co-operation.



Selma Schiller
Lecturer: Graphic and Interior Design
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CONSENT FORM

I,

(Name of Graphic Designer)

Agree to participate in the mentioned research project.

Do not agree to participate in the mentioned research project.

Graphic Designer's signature

Date

Thank you for your cooperation.

Selma Schiller (Researcher)

Appendix D:

Cycle 1:

Data recording and reporting

1. Interviews with graphic design students

Twenty-two second-year and fourteen third-year graphic design students provided the following data according to the questions asked during the interview. What is represented in this paragraph is the recording and reporting of the data in the form of inventories and is in the order from highest to lowest frequency of appearance.

a. Dominant teaching methods

- “Teaching with visual aids” (10).
- “PowerPoint presentations” (8).
- “Class consultations and/or lecturer interactions together with theoretical input” (7).
- “Practical output and experimentation or ‘the freedom to explore’” (5).
- “Group discussions and research” (4).
- “Practical demonstrations and explanations” (3).
- “Step-by-step instructions” (2).
- “Self-study” (2).
- “Constructive criticism sessions” (2).
- “Continual assessment” (control sheets) (1).

- “Practical output while being assessed” (1).
- “Direct feedback on work” (1).
- “Performance under pressure” (1).
- “Teaching with questionnaires” (1).
- “Humour in teaching” (1).
- “Interacting with the environment” (1).
- “Lecturer assistance” (1).
- “Real-life challenges” (1).
- “Group work” (1).
- “Lectures by professionals” (1).
- “Class participation” (1).
- “Videos” (1).
- “Positive input from lecturers” (1).

b. Preferred teaching methods (and reasons given for the preference)

- “Class consultations and/or lecturer interactions” (6).
The reasons, according to the students, for why they preferred this teaching method included that they were “able to not only

share our designs, but also our fears”. Some students also mentioned that it improved their understanding, because they could ask questions while in the design process and mistakes could be dealt with immediately. Another student mentioned “an interactive environment like this creates competition, constructive criticism, teamwork and confidence, which are essential for creativity”.

- “PowerPoint presentations” (5).

The reasons given in support of this methods were the improvement of and assistance in understanding as well as being more professional.

- “Teaching with the help of visual aids and experimentation and/or the freedom to explore” (4).

In support of this method, students commented that “it is inspiring”, “it improves understanding” and “it explains the needed output”. The students indicated that they loved experimentation and the freedom to explore, because they learnt more through experimentation and could apply the methods in order to suit themselves. Furthermore, they believed that it encouraged them to be more creative and improved understanding.

- “Practical demonstrations as well as constructive criticism sessions” (3).

Constructive criticism sessions, according to the students, also improved understanding by highlighting mistakes without creating negative feelings. They were of the opinion that they struggled to see their mistakes and that these sessions assisted therein.

- “Combinations of teaching methods. One such a combination is PowerPoint presentations combined with class discussions” (2). Students preferred this combination, because it improved understanding and ensured better results due to the fact that, as one student notes, “you know what others think of different designs”.
- “Theoretical input, research and practical output” (2). The reason mentioned is that it “is effective due to the fact that this is mostly the working process in the industry”.
- “Practical output, because it gets students involved” (1).
- “Theoretical input, because goals are clear” (1).
- “Self-study, because things can be interpreted individually” (1).
- “Direct feedback on work, because it improves techniques” (1).
- “Teaching with questionnaires, because it improves understanding and everyone can share comments” (1).
- “Real-life challenges, because it improves preparation for the industry” (1).
- “Positive input from lecturers, because it builds confidence” (1).
- “Practical output and continual assessment, because it creates a personal relationship between the lecturer and student” (1).
- “Practical demonstrations followed by discussions, because it gets everyone involved” (1).

c. Preparedness for career

The second- and third-year graphic design students were asked how well they felt they were being prepared to enter a career in graphic design. Their responses to this question are kept separate because of the different year levels in order to provide a more accurate outcome. The outcomes are grouped into three categories, namely good, moderate and bad. Additionally, they are converted into percentages for clarification.

Bearing in mind that they still would undergo at least another 18 months of studying, the interviews with the second-year graphic design students revealed that 59% of them felt that they were well prepared to enter a career in graphic design. Fourteen percent felt that the preparation was moderate but lacking in some areas and 27% felt the preparation was bad.

The transcription of the interviews revealed the following phrases that were coded as reasons given by the second-year students who felt that they were being properly prepared to enter a career in graphic design:

- “I learn the necessary skills at the suitable levels” (1).
- “I am feeling excited and anxious at the same time” (1).
- “The requirements are challenging and interesting” (1).
- “I am growing and learning something new every day” (1).
- “I feel creative and ready to succeed in life” (1).
- “There is a lot of self-study” (1).

- “I feel inspired to hand in on time” (1).
- “The intensity of deadlines keep [sic] us on our toes – that is what industry requires” (1).
- “I aim to get better marks for every project” (1).
- “I did research on the career” (1).
- “I receive enough information and guidance” (1).
- “It is an honour to explore the field with no boundaries” (1).
- “Our work and effort are appreciated” (1).
- “We learn how to respect the world we life [sic] in” (1).
- “We learn through experience” (1).
- “All aspects of graphic design are covered” (1).
- “We experience real-life situations and learn how to approach clients” (1).
- “We learn how to produce good design” (1).

The students who felt that the preparation was moderate but lacking in some areas identified the following shortcomings during the interviews:

- “I would like more recommended material, books and magazines to see what is happening in the world of design” (1).

- “I would like more interaction with other universities to see what the competition is doing” (1).
- “We have real-life situations, but it is still lacking in client communication” (1).
- “There is too much spoon-feeding” (1).

The students who felt that the preparation was bad presented the following reasons for their statement during the interviews:

- “I still have some blanks that need to be filled in” (1).
- “I am still struggling with technical skills” (1).
- “I would like to visit more agencies” (1).
- “I need more motivation and encouragement” (1).
- “Some lecturers are incompetent and only waste time” (1).

The interviews with the third-year graphic design students, who still faced another six months of studying, revealed that 64% of the students felt that they are well prepared to enter a career in graphic design. Twenty-one percent felt that the preparation was moderate but lacking in some areas and 14% felt the preparation was not to standard.

The transcription of the interviews revealed the following phrases that were coded as reasons given by the third-year students who felt that they were being properly prepared to enter a career in graphic design:

- “What you put in is what you get out” (1).
- “It is overwhelming” (1).
- “I am gaining enough information” (1).
- “I will be able to compete and survive” (1).
- “We use a variety of media, thus getting a lot of experience” (1).
- “I have learned to manage my time” (1).
- “I have learned how to respect other people’s ideas and creativeness” (1).
- “This is as close as possible to real-life” (1).
- “We are able to combine design elements and use software” (1).
- “The preparation is better than what I expected it to be” (1).

The students who felt that the preparation was moderate but lacking in some areas identified the following shortcomings during the interviews:

- “I need more experience” (1).
- “Higher expectations encourage greater results – so I feel confident, but scared” (1).
- “I need more information to be fully prepared” (1).

The students who felt that the preparation was not to standard presented the following reasons for their statements, as transcribed during the interviews and in no particular order:

- “I am still confused and scared” (1).
- “I need more skills” (1).

d. Your view of the ideal world in which quality of life is enhanced

Most of the students wanted world peace (6), in other words their ideal world would have no wars and no crime, and people would live in harmony with and have respect for one another (6). Next on the list were students who desired a world with a wide range of possibilities and opportunities (4). Sharing the third place was a comfortable world (easy and relaxed) with no poverty and a world filled with positive energy (4). From a design point of view, some of the students mentioned a world with better visual communication (2), passionate design (2), lots of creativity (2), colour and inspiring surroundings, with innovation (2) and no limitations (2). Others wanted a world where love (2), happiness (2) and selflessness (2) were the foundation, with no negative emotions like hatefulness (2). Some students also mentioned a friendly (2), clean and fun-filled environment (2). Other students wanted a realistic and energetic world where people were informed and wise (2).

The following were single statements as recorded:

- “A healthy world” (1).
- “An economically balanced world” (1).

- “A world with no bad design” (1).
- “A world where people strive to better themselves” (1).
- “A world with constructive criticism” (1).
- “A world where each individual knows his/her role and uses his/her skills and talents in a positive way” (1).
- “A world where I am able to dream” (1).
- “An immaculate world” (1).
- “A world filled with good people” (1).
- “An interactive world” (1).
- “A world where humanity is a priority” (1).
- “A world with improved technology” (1).
- “A diverse world” (1).

e. Role of graphic designer in creating the ideal world

Some students appeared surprised at this question because they had never before realised this opportunity.

Most of the students responded with the fact that they could effectively deliver their message to the world (6) or just communicate positively with the world through creative design (4). Other students mentioned

that they should “explore creativity” (3), “work hard” (3) and “improve myself” in order to contribute to the visual world (3). Some students realised that others could be heard through their designs (2) and that visual communication could be used to encourage environmental awareness (2). Two students indicated that their ideas might improve the world (2), while others believed that “being exposed to more cultures, beliefs and lifestyles will improve communication skills” (2).

The following were single statements as recorded:

- “I can give my opinions through my design” (1).
- “I can ensure that people are visually literate and educated” (1).
- “I can use visuals to stimulate happiness” (1).
- “By doing what the client wants” (1).
- “I can make people more aware through my visuals” (1).
- “I can make people more aware of the power and importance of visual communication” (1).
- “I will be a responsible designer” (1).
- “I will lead by example” (1).
- “I will practise what I preach” (1).
- “I will always strive for success” (1).
- “I can promote peace through design” (1).

- “My design can help people to understand the world” (1).
- “My design can educate” (1).
- “Through my design I can put the world in a different perspective” (1).
- “My design can inspire people” (1).

f. Essential qualities of a graphic designer

A majority of students indicated that creativity (16) would be the number one quality that a graphic designer needed. Others were of the opinion that hard work (8) and passion (7) would also be high on the list. Some students stated that “the ability to communicate effectively with people” (5) was another important quality. Other qualities mentioned by the students included determination (4), open-mindedness (4), being goal orientated (4), and the ability to accept differences (3) and to be educated (3). Other students mentioned qualities such as time management (3), talent and the skill to visualise what a client wants (3).

A few students pointed out that the ability to understand people (2), perseverance (2), courage (2), discipline (2), self-knowledge (2), humour (2) and an informed and positive attitude were also important qualities (2). According to them, a graphic designer needed to “love the job” (2), be “able to practice” (2), to “work on his [sic] own” (2) and to “do research on design aspects” (2).

The following were single statements as recorded:

- “The ability to be self-employed” (1).
- “Working with no limitations” (1).
- “You need experience” (1).
- “You must have respect for other people’s work” (1).
- “You need a lot of energy” (1).
- “You must believe in what you do” (1).
- “You must understand design” (1).
- “You need to stay calm” (1).
- “A graphic designer must be streetwise” (1).
- “You must have the need to express ideas” (1).
- “One should be able to distinguish between right and wrong” (1).
- “A graphic designer must be original” (1).
- “You must be able to work in a team” (1).
- “You must be able to communicate visually” (1).
- “You need the required skills” (1).
- “You must be able to do what the client wants” (1).
- “You have to be curious” (1).
- “You need the will to explore” (1).
- “You must be self-driven” (1).
- “You need wisdom” (1).
- “You must be able to handle criticism” (1).
- “One needs to be flexible” (1).
- “You need to adapt the skill of being direct” (1).
- “You must be unique” (1).
- “One needs to develop an awareness of the environment” (1).
- “You must be able to do good design” (1).
- “You need to network” (1).
- “You must use your opportunities” (1).
- “You must pay attention to detail” (1).
- “Graphic designers must always be inspired” (1).
- “You need to be able to plan” (1).
- “You need patience” (1).

- “You need stamina” (1).
- “You must be able to cope with very little sleep” (1).

2. Interviews with lecturers in graphic design

The five lecturers in graphic design at Tshwane University of Technology provided the following data during the interviews. Although similar, but appropriately nuanced, interview questions were asked of the lecturers in graphic design and the graphic design students (as reported in the previous paragraph), the responses from the staff were more limited. The most obvious reason is that only five lecturers participated in the interviews. A more covert reason for the seemingly limited responses could be the direct collegiality and subsequently more relaxed context within which the interviews were conducted. On the other hand, the limited responses could also be attributed to an acute awareness of academic correctness and sensitivity to prevent any unnecessary conflict.

a. Dominant teaching methods

- “PowerPoint presentations” (2).
- “PowerPoint presentations with student participation” (1).
- “Question-and-answer sessions” (1).
- “Traditional lectures” (1).
- “Participatory situations” (1).
- “Practical demonstrations and/or physical assistance” (1).

- “Throwing students into the deep end by a self-taught trail-and-error method” (1).
- “One-on-one consultation” (1).
- “Overviews of students’ projects” (feedback sessions) (1).
- “Problem identification” (1).

b. Preferred teaching methods

- “PowerPoint presentations preferably interactive” (1).
The reasons for preferring this method included that it is “quick and easy”, “it links up with the language and/or frame of thinking of most students” and “it improves understanding”.
- “Self-taught trial and error” (1).
The grounds given for this preference are that students are not always on the same level and they learn at a different pace. Thus, this method would enable them to discover their potential through exploration. One lecturer added: “I can then fill in the gaps or focus on individual weaknesses in order for core learning to take place.”
- “Problem identification and solving through physical assistance” (1).
The reason mentioned for this was to improve understanding.
- “Traditional teaching methods” (1).
The lecturer who preferred this method acknowledged that it was not effective anymore, because “students are getting more and

more use to having a participatory role in lectures”. This makes it evident that some lecturers are willing to adjust their teaching, even though it is not their preference, in order to be more effective.

c. Preparedness for career

Three of the five lecturers responded positively to this question as they felt that they were preparing the students well for their careers (3). However, a lecturer who only taught first year students stated, “I must first deal with the emotional traumas many students have in their first year before I can start preparing them for their career” (1). She did this through positive reinforcement. However, according to another participant, this can already be seen as career preparation (1). This participant believed that teaching students skills is not the only preparation required (1). She preferred to concentrate on students’ emotional development and life skills, in other words the whole process of moving into the world of work (1). She stated, “success doesn’t come from your technical skills only, a huge part of your success lies in your ability to be creative, to change your mind-set and/or the ability to move into a quick frame of thinking that might be different from what you know” (1). She added that, “a lot of students are seriously lacking in life skills like integrity, the ability to work as a team, having respect for one another, and being loyal” (1). She used class discussions to teach students these and other life skills. For example, “when students bring visual material to class we might discuss the appropriateness of the visuals as well as the ethics thereof in an open class situation where everyone is allowed to participate. Thus, developing self-confidence and maturity, which are fundamental qualities for a graphic designer” (1).

The two other lecturers who also believed that they were successful in preparing students for a career in graphic design gave the following

reasons for their belief. They provided real-life challenges and taught the students more than just skills (2). According to one of them, “students need to be aware of the environment and the human factor involved in the design process” (1). He also taught students to be problem solvers, and exposed them to the thinking process behind that in order to be more open-minded to solve problems visually (1). The other lecturer supported her belief by stating, “previous students came back to tell me that they only realised, once they started to work, how valuable my teaching actually was” (1).

The last lecturer stated that he was involved in fourth-year teaching and that this required an enormous research component (1). According to him, “industry seldom understands the value of research, thus it is not very relevant” (1). However, he tried to relate students’ methodologies to what they could offer a client in terms of research in order to make his teaching more relevant (1).

d. Your view of the ideal world in which quality of life is enhanced

Most of the lecturers wanted a peaceful world (3), as well as one filled with harmony and respect for one another (3), especially mutual respect for one another’s values and viewpoints (2). They also desired a relaxed (2), timeless world with no poverty and hunger (2). One participant imagined “a world filled with quality and beautiful design” (1).

Most of the lecturers in graphic design had more or less the same idea of an ideal world, and the next section describes their role in the creation of such an ideal world.

e. Role of graphic designer in creating the ideal world

All the lecturers involved in this study felt that they had some responsibility in making students aware of their responsibility in creating an ideal world, even though, according to one, “a big portion is still up to the students” (1). Another lecturer stressed that “graphic designers have a unique position in the sense that they can actually make the world a better place through the things that they create. They have an impact on what people use and what they see every day. Thus, students need to realise their impact on society in order to be more responsible in their design. They also need to realise that everything does not evolve around money, although the industry does” (1). One lecturer said this could be done through having a positive influence on students and showing them their potential (1). Adding to this, another lecturer believed that “students need to work together in order to solve social problems” (1).

According to the lecturers, other methods that can assist in communicating this message, are “explaining to students that life isn’t perfect” (1), that “students have a role in making an imperfect life more perfect” (1) and that “students need to have an attitude of trying to help others through their design” (1). Furthermore, “a lecturer needs to really listen to students in order to perceive possible deeper emotions, because this can have an effect on their relationships, work, class attendance, etcetera. In other words we need to be counsellors in order to pull students through difficult times” (1).

A last comment made by a lecturer was that “it is difficult to change students’ attitudes, especially because the design industry believes that they are above everyone else. The industry needs to come back to earth in order for things to change and then it is also up to the students to change their attitudes” (1).

f. Essential qualities of a graphic designer

The lecturers in graphic design viewed creativity (5) as an essential quality but, according to them, there are other qualities that are just as important. Graphic designers must “be strong” (1), “flexible and logical” (1), but also “humble with magnanimity” (1). They need to “be able to handle criticism without taking it personally and they need to be stable, in other words separating work from their personal emotions” (1). They also need to be “true to themselves” (1) and “know their own strengths and weaknesses” (1). “They need to understand people in the sense of interpreting what they want correctly, question what needs to be questioned and be able to work as a team” (1).

3. Interviews with professional graphic designers

Five professional graphic designers provided this data.

a. Dominant teaching methods

It is important to mention here again that three of the five participants had more than 15 years’ experience in the graphic design industry. The other two participants had two years’ experience in the graphic design industry.

The three participants with more than 15 years of experience stated that graphic design courses concentrated mainly on fine arts when they were studying, thus there were a lot of shortcomings (3). Apart from the fact that things were still done by hand and not on computers, there was also not enough emphasis on design (3).

One of the participants gave more insight into these shortcomings. “Typography, for example, the facts and principles were taught outside of the context. Lecturers were not up to date with the latest developments and were not able to put it in context. Drawing, which is a fundamental necessity to be able to design, was also not on standard and another problem was cultural disconnect” (1) According to him, students did not fully know how to engage with the lecturers and the lecturers did not fully know how to engage with students of other cultures. He added, “I’m not saying the lecturers were necessarily bad, I just think that perhaps the teaching methods were inappropriate to what needed to be taught” (1).

Another participant indicated that his education was “too informal, only done by professionals from industry showing their skills” (1). Another shortcoming was that “advertising, art and graphic design were seen as separate functions” (1).

The other two participants who had two years of experience in the graphic design industry were of the opinion that a basic introduction and self-taught approach were more dominant (2).

b. Preferred teaching methods

The second interview question concentrated on the preferred teaching methods. Professional graphic designers were asked which teaching methods they preferred while they were still studying and to explain why they preferred certain methods.

One of the professional graphic designers with more than 15 years of experience stated: “Teaching must be more relevant to your experience” (1). He mentioned that “when things are made more relevant to your world your concentration levels are higher and it is a

much more positive experience. This also ensures the building of respect” (1).

Another professional graphic designer with more than 15 years of experience mentioned, “Students need a lot of talk and explanation through visual aids, because this will ensure that they use their visual memory, thus, absorbing more than when people just explain without any visuals” (1).

A formal teaching approach was also mentioned by one of the more experienced professional graphic designers, because “students need structure and also a fundamental skill set that is rounded off with some kind of mentorship” (1).

In contradiction to the above statements, the two professional graphic designers with two years of experience wanted more open briefs with self-discovery and exploration (2). According to one of them, “it is necessary to explore your own talent, try new things and break boundaries, thus learning more” (1).

c. Preparedness for career

The third interview question focused on career preparation. The professional graphic designers were asked how well they were prepared when they had to enter their graphic design career.

Only one of the five professional graphic designers felt that he was prepared for the industry (1).

According to the other four they were not prepared at all (4). They were of the opinion that students needed more business skills (4), for example how to deal with clients (3), meetings and projects (3), as well

as how to quote and invoice clients (2). They also felt that more guest lecturers would enhance the students' experience (2), and one graphic designer stated that "students need more site visits and exposure to companies and to working environments" (1). However, everyone felt that the student has as much responsibility as the lecturer (5). The student must really be interested and do his part in gaining as much information as possible. He must furthermore also ensure that he knows what he is getting into and that he has a love for the job (5).

One professional graphic designer stated, "I did not even know the fundamental principles of design when I finished my studies" (1). He was of the opinion that it was because of his choice of institution. He recommended that students do research on institutions before they apply to study at a specific institution. Therefore, according to him, "students must choose wisely" (1). This choice might also enhance their ideal world, as discussed in the next interview question.

d. Your view of the ideal world in which quality of life is enhanced

The professional graphic designers agreed with most of the desires of the lecturers regarding the world in which they would like to live. They also wanted a peaceful world with no poverty and hunger (5). One participant, however, added "a world filled with contented relationships where everybody has the opportunity to achieve their maximum potential. Thus, no dominant cultures, but people celebrating each other's cultures and being proud of their own" (1). Another participant fancied "a world filled with universal knowledge in order for everyone and everything to work together. This will lead to people appreciating one another" (1).

e. Role of graphic designer in creating the ideal world

All the professional graphic designers were very aware of their position in society, as well as their responsibility (5). However, one of them stated that “South Africa is very commercially orientated and for this reason designers have to do designs that might violate people’s rights. Few designers have the luxury of allowing what they do to make a positive impact on the world” (1). However, he continued that “Europe and the USA have moved on, there is a greater freedom of expression and there are also facilities and platforms for that expression” (1).

The other four professional graphic designers were more positive in being able to communicate a positive message to society through their design skills (4). One graphic designer granted that “designers should serve business interest, but the design must still be good, because what you sow is what you reap” (1). He added that “graphic designers are egotistical and they need to get over their egos and focus on stuff that is real. In other words design needs to make a fundamental difference to the lives of people on an everyday basis” (1). One of his examples was “designers can make a difference to people that are living in shacks” (1). Thus, he believes that designers can shape the world by creating design solutions for social problems.

It is obvious that graphic designers will need certain qualities in order to tackle these social issues. Thus, the next step will be to determine the essential qualities a graphic designer needs to possess in order to succeed in creating the ideal world.

f. Essential qualities of a graphic designer

The professional graphic designers agreed that creativity (5) was an important quality but, according to them, passion and hard work were

more vital (5). “Graphic designers need to be efficient and work 24 hours a day” (1). They need to have courage (1), determination (1) and confidence (1), but they also need to be honest (1), respectful (1), mindful (1) and patient (1), “they need the ability to express themselves, but with humanity – not imposing their will on other human beings” (1). Additionally, “they need to be able to collaborate with other people and not be afraid to explore new things” (1).

Appendix E:

Cycle 2:

Data recording and reporting

1. **Cycle 2: Closing interviews**

A semi-structured interview with the same six questions that have been asked during the first cycle with a purposive sample of 5 second- and 5 third-year students was repeated as an additional measure of crystallisation.

a. **Dominant teaching methods**

The teaching methods that the students mentioned were many that have been mentioned in cycle one with an approximate same frequency. However, the responses also included real-life challenges, teaching with the help of checklists, learning task feedback and the client/designer role-play.

b. **Preferred teaching methods**

Many of the same preferred teaching methods that were mentioned by students in the first cycle were repeated in this one. However, real-life projects, the use of checklists and the client/designer role-play sessions were on top of the list of preferred teaching methods. Some loved the fact that they were challenged with “real-life projects”, while others preferred the checklists.

According to one student, “the checklists helped me to plan, monitor my progress and assess my final project”. Some, however, complained about the length of the checklists. Another student preferred the client-designer role-play; “this is very effective, because the ‘client’ gave constructive input”. According to her, this assisted in communication skills and added to an improved artistic outcome that manifested in

creativity, thus adding to the essential qualities that graphic designers need to be successful in their careers.

The students saw the real-life challenges as relevant to their studies, and the checklists assisted them in the work process. The client/designer role-play further enhanced the real-life challenge, as well as its relevance, thus ensuring that the students acquired the artistic quality of creativity that is essential for their careers.

c. Preparedness for career

The students had many of the same responses with the same approximate frequency value as in the previous cycle. All the students, except for one, felt that their preparation was very successful. The one student who did not respond positively said: “I need more knowledge, practice and understanding” as she was not yet confident.

The other students, who felt they were being well prepared, justified their responses by stating that the methods used in this cycle made them feel like they are already working in the industry. They realised that they would have to work with clients and that it was not always going to be easy, but they felt confident that they would be able to handle it. One student mentioned: “I am already freelancing as a graphic designer and I am getting more clients due to these preparations.”

Those who were already working in the industry experienced the similarity of these teaching methods to their day-to-day encounters. These teaching methods therefore were very successful in preparing students for a career in graphic design.

However, one must keep in mind that students who said that they were not ready yet, might not be ready due to the fact that they have not completed their studies yet.

d. Your view of the ideal world in which quality of life is enhanced

The students mentioned, with almost equal frequency levels, a preference for the same kind of qualities for the ideal as had been expressed in the first cycle. Most students desired a “peaceful,” “colourful” and “fun environment” filled with a lot of “good design”. Some wanted to work for a good company or wanted their own companies. One student stated: “I want to be able to feed my family as well as the poor.” Another student desired “balance in my life in order to control my challenges and situations in a positive manner”. She also wished for freedom, but she realised the responsibility that comes with freedom. I found that an ideal world for most students was a combination of personal, social and artistic elements that would make them content.

e. Role of graphic designer in creating the ideal world

Most of the students were of the opinion that they could use their graphic design skills to “positively communicate”, “change the mind-sets of people” and “be a role model”. According to them, this could be done through “hard work”, “determination”, “versatility”, “creativity” and “innovation”. Networking with other graphic designers would also enhance this process. There was a significant shift in this cycle towards the fact that the students recognised the importance of their roles as graphic designers as was noted in cycle one. Most of them realised during this cycle that they could use their graphic design skills to a

lesser or greater extent to create an ideal world. However, in order to achieve this, graphic designers need certain qualities.

f. Essential qualities of a graphic designer

Most of the mentioned qualities mentioned in cycle one were repeated in this cycle with virtually the same level of frequency. Most of the students still believed that creativity was the most important quality. Next in line were skill, passion, dedication, time management and general knowledge. Other qualities that were mentioned by individual students included “optimism” and “good communication skills”. Good working relationships are also vital and one student stated the importance of “the ability to think on your feet”.

However, only two of these qualities can be categorised as artistic qualities, namely creativity and skill. Four of the qualities mentioned can be categorised under personal qualities, namely passion, dedication, general knowledge and optimism. Three of the qualities mentioned can be categorised as professional qualities, namely time management, good working relationships and the ability to think on one’s feet. One quality that was mentioned could fall in the leadership category, namely good communication skills.

Thus, more personal and professional qualities were mentioned in this cycle than artistic qualities. Even though a lot of artistic qualities were not mentioned in relation to this specific question, it does not mean that they were not present. When the students were asked to describe their ideal world, most of them fancied a colourful environment with a lot of good design, which are all artistic elements. They also realised that they could use their innovation, versatility and creativity to create such an environment.

Appendix F:

Cycle 3:

Data recording and reporting

1. **Cycle 3: Closing interviews**

A semi-structured interview with the same six questions that have been asked during the first cycle with a purposive sample of 5 second- and 5 third-year students was repeated as an additional measure of crystallisation.

a. **Dominant teaching methods**

Although there were no real teaching methods that were used in this cycle, the students referred to nearly all the ideation techniques that were involved in this cycle.

b. **Preferred teaching methods**

Again, although no distinguishable teaching methods were used, the simplified “planning checklist” was preferred. One student said: “I prefer the step-by-step guidance of the planning checklist, because it builds my confidence and it creates respect for my own work.” The other checklists were also highly appreciated.

Further, the students were very positive towards the ideation phase in this cycle. One student commented: “It forces me to think in a different direction or in other words to think out of the box.”

There were mixed responses to the different mediation techniques, although the mind map technique was preferred, for the following reasons:

- “It triggers different ideas and concepts.”
- “It strengthens ideas by assisting you to think outside of the box and therefore forces you to consider unusual possibilities, thus improving creativity.”
- “It makes you question your own ideas and assists in personalising your project.”
- “It broadens my view of how other people perceive things.”
- “It is very enjoyable.”

c. Preparedness for career

The students were then asked if they felt that the teaching interventions in the third cycle prepared them for a career in graphic design. All the students who took part in the interviews agreed that they were being prepared very well. An extensive list of reasons was presented to support their opinions:

- “We are exposed to what is expected from us in the industry due to the real-life projects.”
- “I feel a lot of pressure and am forced to get out of my comfort zone, but I realise that is a reality in the industry.”
- “I learn how to plan and prioritise.”
- “We learn how to work as a team.”

- “We learn how to interact with clients, thus being more professional.”
- “I’ve learned how to see other people’s views.”
- “We learn different styles in order to meet client requirements.”
- “Our personalities are developed through the consultations, thus preparing us to communicate effectively with others.”

In addition to the above list, some students stated that they have worked or are already working with professional graphic designers and that this learning experience was virtually the same as their real-life working experience. Other students admitted that they could already see huge improvements in the execution of their learning tasks, thus making them more confident.

One student acknowledged that “the learning is totally different to what we are used to and it is a great challenge to find the required knowledge on your own”. Another student agreed with the fact that “the learning is totally different and very challenging as well as frightening”. She confessed “it made me negative at first, but I now realise the effectiveness thereof due to the requirements of industry”. There was another student who admitted her confusion at the beginning, but she realised that she gained more confidence during the process, thus making her work easier as well as transforming her into a better designer. She added “it improved my understanding and made me more professional”.

d. Your view of the ideal world in which quality of life is enhanced

Most of the comments made earlier were repeated and many closely related ones were mentioned. Some of the more significant and new ones were that “others must see the world through my eyes, being a relaxed and sympathetic place without any crime”. This student added: “I would like to help people through my design skills without asking for money.” One student wanted “a more educative world” and another wanted “a world where technology helps people rather than destroys them”. “A respectful world” was also mentioned.

e. Role of graphic designer in creating the ideal world

It is clear that the students’ apparent ignorance of the influence they might have in fulfilling this role disappeared as they moved from the first cycle to the third, they had become aware of the significance of the responsibility they have.

In fact, in the third cycle the students acknowledged their responsibility in creating such an ideal world by creating only good and original designs. They realised that they could use their graphic design skills as well as technology to create awareness, educate and communicate responsibly. One student added that “responsible design means not designing for money only – you must ask yourself if the message is worth the money”. Another student said, “You must start with yourself. If you are a responsible designer your good qualities will spread to the others around you”.

f. Essential qualities of a graphic designer

Although some artistic qualities were again mentioned when this question was asked, it was the professional qualities that were the focus. Although all of the qualities mentioned were not necessarily purely professional, what follows are the qualities mentioned, in order from most often mentioned to least mentioned:

- “Passion”
- “Hard working”
- “Perseverance”
- “Human knowledge”
- “Discipline”
- “Open-mindedness”
- “Consideration”
- “Business skills”
- “Leadership”
- “Listening skills”
- “Knowledge”
- “Trustworthiness”
- “Skills”
- “Patience”
- “Endurance”
- “Positivity”
- “Originality”
- “Joyfulness”
- “Ethicality”
- “Time management”

It should be mentioned that many of these “professional” qualities may just as well be categorised as personal qualities.

Appendix G:

Cycle 4:

Data recording and reporting

1. Cycle 4: Closing interviews

A semi-structured interview with the same six questions that have been asked during the first cycle with a purposive sample of 5 second- and 5 third-year students was repeated as an additional measure of crystallisation.

a. Dominant teaching methods

When asked about the dominant teaching methods experienced during this cycle, the following methods were mentioned by the students:

- Real-life challenges
- Video clips
- Audio recordings
- Slide shows
- “Review pairs” technique
- “Think-pair-share-switch” technique
- “Focus discussion pairs” technique
- “Talking chips” technique
- Edutainment
- Class presentations with stickers

b. Preferred teaching methods

Most of the students were exceptionally pleased with the real-life challenges that were presented to them. The reasons for this, according to the interviews held with the students, included the fact that “a brief is more powerful due to its real-life contents” and “briefs like this evoke a lot of emotions, which encourage student involvement”. Even though these were not actually real-life challenges in the truest sense of the

word, two aspects became clear: even an appropriate real-life reference or a simulation thereof is good enough to ignite the foundational disposition and motivation of the student, namely a will to learn (Barnett, 2007:102). However, there is a great deal of effort that goes into the design of such a learning task and the subsequent executions thereof in order to improve quality of life. All learning tasks should be real-life challenges in order to transform the human being and to improve quality of life the moment they are executed. With direct reference to the results of this research, these learning tasks touched the students personally and in some instances very deeply. When this occurs, access to one's authenticity is unlocked and the potential of personal transformation of the highest order is at hand. Education is indeed not about finding things, but about finding ourselves (Ackoff & Greenberg, 2008:14). This is the epitome of the acquisition of the personal quality of maximising human potential.

Co-operative learning, in all its variations and techniques, and even when it is employed during learning task consolidation, contributed significantly to the acquisition of the personal quality of maximising human potential because sharing one's work with others in a co-operative learning context where quality is at stake is exposing oneself to the community of truth (the co-operative learning group). As Palmer (1998:104) notes, "The firmest foundation of all our knowledge is the community of truth itself. The community can never offer us ultimate certainty – not because its process is flawed but because certainty is beyond the grasp of infinite minds. Yet this community can do much to rescue us from ignorance, bias, and self-deception if we are willing to submit our assumptions, or observations, our theories – indeed, ourselves – to its scrutiny".

The student interviews reflected positively on edutainment – if and when it is executed by a professional expert. The following comments confirm this:

- “The person involved has real-life experience.”
- “It helps to see someone else doing something practical.”
- “Edutainment is very inspirational.”
- “It helped me to understand the project better.”
- “He gave relevant information on research.”
- “He was still challenging us.”

c. Preparedness for career

In the third question the students were asked how these teaching interventions prepared them for a career in graphic design, and all the students that were interviewed responded positively to this question. They felt that the preparation was very effective, due to the intense level of the real-life challenges. One student mentioned that “this is very satisfying and I can now acknowledge my strengths and improve myself even more”. Another student acknowledged, “I am at a point where I feel 100% prepared to go out and make my mark in the industry”. She was put under pressure in these classes, but she could see a great improvement in her work. Others were of the opinion that they still learnt something new every day and realised that there was more to be absorbed.

They also felt that the co-operative learning added much value to this preparation, because they were able to share ideas with each other. This led to more inspiration and improved ideas, as well as their ability to handle criticism. They added that this allowed them to overcome their selfishness and taught them how to respect and appreciate other people’s ideas while growing as individuals. One student mentioned, “I was not comfortable with group work, even though I knew it is an industry requirement. However, now I am confident to share ideas, brainstorm and be playful in the process”. Another student said, “These

methods helped me to overcome mental blocks and pushed me to my limits in order to be as creative as possible, thus being a better designer”.

Even though these teaching interventions, according to the students, successfully prepared them for a career in graphic design, it is still essential to determine if the students acquired any qualities during this cycle. The following three questions were asked in order to determine the acquisition of qualities, especially the personal quality of maximising human potential.

d. Your view of the ideal world in which quality of life is enhanced

Besides descriptions of an ideal world that were repeated by some students, two students made it very clear that the projects in this cycle changed their views. One discovered that “one could achieve considerably more by working together than trying to change the world on your own”, and the other one stated, “I interpret the world differently after these projects”. She explained, “the world, especially youngsters, needs more superheroes, in other words people with different qualities that they can look up to”. She added that, through these teaching interventions I had become such an important person for her, because I assisted in her growth as a person. Thus, according to her she developed personal qualities through these teaching interventions.

e. Role of graphic designer in creating the ideal world

Some students wanted to become role models for others by being positive and helping them find solutions for their problems through design communication. Others wanted to use design to ensure a

creative and stylish environment, thus making people happy as set out as one of the responsibilities of a designer by Buchanan (1998:11).

Other students thought of workshops and projects that would get people involved in community projects. Through this they wanted to take action and not only talk about changing the world. They added that this might also inspire others to take action. Another student's action was to "use recycled paper in order to preserve our natural sources".

f. Essential qualities of a graphic designer

Many qualities were identified and repeated often by students. Most students still believed that creativity was the most important quality, followed by general knowledge and an understanding of people, passion, positivity, patience, skills, open-mindedness, love and the ability to communicate clearly.

Individual students added "motivation", "determination", "innovation", "observation" and "the ability to manage time effectively" to this list. "The ability to organise and work selflessly as a team" is other quality that was mentioned. One student added that "a graphic designer must be well informed and be able to pay close attention to peoples' needs".

Appendix H:

Cycle 5:

Data recording and reporting

1. Cycle 5: Closing interviews

I radically changed the structure of the interviews and some of the questions, as indicated in the paragraphs below. Only the relevant highlights from the interviews are reported.

a. Describe your experiences of my teaching practice

I utilised the students responses and constructed a story from them, which I then checked for correspondence and surprisingly there were no significant discrepancies.

The students' responses told the following story:

Your teaching during the past few months was very different from what we were used to: you would teach us different design methods and techniques and then you would give us a project in which you wanted us to use the methods and techniques you had taught us to complete the project. Then you would give us the brief and we needed to complete the project.

The students' responses in relation to their experience of the way in which I had taught them during the last few months told the following story:

You gave us a real-life challenge to resolve or a real-life graphic design problem to solve. This is the same as the brief that you gave us in the past, but this time it is always something that we could expect in our career – something that could be required from us by our clients. This you call a real-life challenge. In that real-life challenge (brief) you sometimes gave us very specific design requirements that we needed to use to solve the problem, but sometimes you didn't give us anything.

You expected us to figure it out for ourselves. You didn't answer our questions and you just told us to find out for ourselves. We didn't like it but it forced us to go and find out, otherwise we could not complete the project or solve the real-life challenge correctly. We finally discovered and explored the different kinds of design techniques and ideation techniques, which was very interesting and valuable. You have become very critical and you always want us to improve everything we do. This sometimes frustrates us. But we suppose that this kind of thing may happen to us in our jobs with our clients. We will have to understand and give them what they want.

But graphic design has an enormous influence on people. It can change the world. That is why you gave us the responsibility to solve such problems to make sure that we would operate within moral, social values. You expected of us to become change agents to create the highest possible quality of life.

b. How well do you say this way of teaching prepares you for your career?

All the students agreed that this way of teaching prepared them well for their career.

Some students referred to this kind of teaching as being difficult at first, but that they became more familiar with it as time went by.

One student explained the support in creative techniques by the fact that "it was difficult, but it made me think and graphic designers need to be able to think outside of the box". These techniques helped her to discover more capability in herself to be spontaneous and think of unusual and uncommon things, thus being more creative. Another student added, "I was very narrow-minded, but I overcame that and am

able to share my ideas now”. Another confessed, “I was scared at first, but I am not anymore thanks to these methods”. She also became more able to handle criticism without taking it personally.

The students also were of the opinion that they would now be able to work and interact with other people, as well as consider their views and opinions. Thus, the leadership quality of an enlightened change agent had been acquired.

c. What kind of world would you like to live in?

Although there was reference to what was mentioned by the equivalent interview question asked in the previous cycles, the responses represented a major transformation. The responses referred to moral and ethical well-being and a personal responsibility to accomplish this to the extent that even money became of secondary importance.

d. Role of graphic designer in creating the ideal world

The students were very positive and passionate when asked how they as graphic designers could create the ideal world.

The students were clear that “the communication must be very clear, because people need to grasp something properly in order to believe it”. Some were of the opinion that they needed to pay close attention to the needs of clients in order for them to speak effectively through their designs. The students wanted to be honest and spiritual people, helping others through their design – “Making people aware of what is really important in life.” One student discovered that “I actually have people’s lives in my hands when I design, for this reason it is of vital importance that I communicate the right message properly”.

More students now wanted to be role models or examples for others to follow. One student said, “Through my example I want people to realise they don’t have to be frightened, that they can be free spirited and loving people, while living peacefully”. Another wanted to be “an example for others to conserve the environment”.

e. What would you say are the essential qualities that these learning tasks required you to acquire as graphic designer?

Besides the repetition of a few qualities mentioned in previous cycles, those that were emphasised and stood out will be presented here:

- Passion for your job
- Hard working
- Be a role model
- Be an example
- Leadership
- Be an inspiration
- Helping others
- Responsibility (I have other people’s lives in my hands)
- Making people aware of what is important in life
- Caring (money is not always important)

It was the idea of being a role model, an example and an inspiration in caring for others, taking responsibility for the lives of people and making them aware of what is important in life that I found striking. More importantly, I was delighted to detect in the microcosm of the classroom a transformation towards these qualities, even though on a small scale. It was obvious that leadership and care had become another set of essential qualities that a graphic designer should possess.